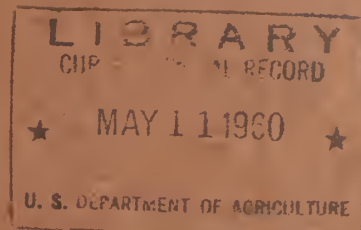


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Volume I

EXPLANATORY NOTES
for
DEPARTMENT OF AGRICULTURE
Fiscal Year
1961

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PREFACE

Project statements -

The obligations shown in the Project Statements are based on the appropriations and activities proposed in the 1961 Budget Estimates. In some Project Statements the activities are further divided into subcategories, reflecting a more detailed description of the work conducted under the appropriation items.

It should be noted that amounts shown for these subcategories in the Project Statements are not always obtainable directly from accounting records formalized by specific account classifications. Wherever it has been necessary to distribute costs to activities for which total amounts are not directly available from the accounts, every effort has been made to base such charges as accurately as possible on available objective information such as periodic time reports, workload measurement systems, etc.

Explanation of increases requested for employee health benefit costs pursuant to Public Law 86-382 -

The budget estimates for 1961 include funds to cover the Government share of Federal employee health benefit costs pursuant to P. L. 86-382, the Federal Employees Health Benefits Act of 1959, approved September 28, 1959. Additional funds requested for employee health benefit costs applicable to the base for 1961 are reflected in a separate column in the project statements for each appropriation item concerned. Health benefit costs applicable to program increases for 1961 are included in each item of increase, and the project statements also indicate separately, as non-add figures in brackets, the total health benefit costs applicable to the 1961 base and to the program increases for 1961. To avoid unnecessary repetition throughout the Explanatory Notes, an explanation common to all health benefit cost increases is provided here rather than under each appropriation involved.

The Federal Employee Health Benefits Act of 1959 provides that the Government will share with employees the cost of providing health benefit plans for the protection of employees and their dependents. The Act becomes effective with the first full pay period in fiscal year 1961 (for most employees of the Department the effective date will be July 10, 1960). Federal costs of the health benefit program cannot be determined finally until benefit plans have been contracted with insurance companies and some experience with employee selection of alternative choices has been obtained. For purposes of estimating fiscal year 1961 costs, therefore, the Budget Bureau has asked all Federal agencies to assume that the Civil Service Commission will set the initial agency contribution per employee at the minimum rates authorized by law (\$1.30 for self only, and \$3.12 for self-and-family, on a biweekly basis). In the absence of reliable statistics, the Budget Bureau also asked for agencies to assume that (a) 90% of all employees would participate, and (b) 40% of participating employees would elect coverage for themselves only, and 60% for self-and-family. With a few minor exceptions in agencies where available information provided better guidelines, these assumptions on participation have been followed in developing the estimates.

Based on the foregoing assumptions, the 1961 Budget Estimates for the Department, exclusive of the Forest Service, which is considered in the appropriation bill for the Department of the Interior and related agencies, reflect a total of \$3,466,921 estimated employee health benefit costs to all appropriations

and funds available, including revolving funds, advances and reimbursements from other agencies, and trust funds. Of this total, the Department agencies propose absorption of \$1,147,326. This is the maximum absorption that can be achieved without impairment of public programs and services for which the Department is responsible. Of the \$2,319,595 increase in appropriations requested, \$2,274,430 relates to the 1961 appropriation base and \$45,165 to program increases proposed for 1961.

The following tabulation summarizes total Federal employee health benefit costs estimated to be incurred by the Department in the fiscal year 1961:

Federal Employee Health Benefit Costs

	<u>Estimated costs applicable to 1961</u>	<u>Estimated absorption</u>	<u>Appropriation increases requested</u>
Total, Department of Agriculture ..	\$4,261,246	\$1,399,651	\$2,861,595
Deduct Forest Service	<u>-794,325</u>	<u>-252,325</u>	<u>-542,000</u>
Net total (excluding Forest Service)	<u>3,466,921</u>	<u>1,147,326</u>	<u>2,319,595</u>

The Federal costs of benefits to annuitants have not been reflected in these estimates since it is understood that estimates of appropriations to the Civil Service Commission are being presented for this purpose.

Cost-based budgets -

P. L. 863, 84th Congress, approved August 1, 1956, provides that "The requests of the departments and establishments for appropriations shall, in such manner and at such time as may be determined by the President, be developed from cost-based budgets" (Sec. 216, Budget and Accounting Act of 1921, as amended). Pursuant to this legislation, it has been determined that estimates for all agencies of the Department of Agriculture would be presented in the 1961 Budget document on a cost basis.

Prior to fiscal year 1960, financial requirements for projects were expressed in terms of "obligations" (goods and services ordered). In the 1960 Budget, estimates for seven agencies of the Department were presented on a cost basis. Cost-type budgets are expressed in terms of "applied costs" (goods and services used, regardless of when ordered, delivered, or paid for).

In the few agencies of the Department with large procurement or construction programs, where long-time lapses are experienced between obligations or deliveries and the resulting costs, differences between annual costs and obligations may be substantial, reflecting chiefly variations in end-of-the-year inventories or progress on construction work under contract. Also in loan programs, the time lapse between the closing of the loan (when the obligation is recorded) and the advance of funds to the borrower (when the cost occurs) may result in material differences between costs and obligations in a particular year. For most agencies, however, differences between costs and obligations are relatively minor, primarily reflecting fluctuations in the value of undelivered orders for equipment and supplies between the beginning and end of the fiscal year. For this reason, and in the interest of providing a consistent basis for evaluating program needs for all appropriations, financial requirements for projects in the Explanatory Notes have been expressed in terms of obligations. Where obligations and costs are not identical, the differences have been briefly explained in footnotes to the project statements.

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AGRICULTURAL RESEARCH SERVICE

Purpose Statement

The Agricultural Research Service was established by the Secretary of Agriculture on November 2, 1953, under the authority of the Reorganization Act of 1949 (5 U.S.C. 133 $\frac{1}{2}$ -15), Reorganization Plan No. 2 of 1953, and other authorities. It conducts production, utilization, and home economics research and the closely associated inspection, disease and pest control and eradication work. The Administrator of this Service is also responsible for the coordination of all research of the Department.

The program of the Agricultural Research Service is organized under three areas of activity as follows:

1. Research is conducted under three major categories: (a) farm research (research on crops and livestock, and farm and land management research); (b) utilization research and development research; and (c) home economics research.
2. Regulatory activities are conducted under three major categories: (a) plant disease and pest control; (b) animal disease and pest control; and (c) meat inspection.
3. The Service administers the Federal-grant funds for research at the State agricultural experiment stations and operate experiment stations in Puerto Rico, Virgin Islands, and Alaska.

The Service carries out emergency programs, when necessary, for the control and eradication of animal diseases, such as foot-and-mouth disease, and for the control of emergency outbreaks of insects and diseases.

The Service also directs research beneficial to the United States which can be advantageously conducted in foreign countries through grants and contracts with foreign research institutions and universities. This program is carried out with foreign currencies under the authority of sections 104 (a) and (k) of Public Law 480, the Agricultural Trade Development and Assistance Act of 1945, as amended. A discussion of the research activities conducted under Public Law 480 is included under the appropriation "Salaries and expenses (Special foreign currency program)." The dollar expenses of the Service in connection with this work are paid from the appropriation "Salaries and expenses."

The Service maintains a central office in Washington, D. C., and operates the 12,000-acre Agricultural Research Center at Beltsville, Maryland. However, most of the work is conducted at approximately 790 other locations in the United States and Possessions and several locations in foreign countries. Much of the work is conducted in cooperation with the State agricultural experiment stations and with other agencies, both public and private. On November 30, 1959, there were 15,965 full-time employees, of which 3,346 were in the Washington metropolitan area and 12,619 were located at other points in the United States and Possessions, and foreign countries.

	Appropriated, 1960	Budget Estimates, 1961
Appropriations:		
Salaries and expenses:		
Research	\$ 67,721,590	\$ 68,981,700
Plant and animal disease and pest control	49,800,600	48,775,600
Meat inspection	<u>21,324,900</u>	<u>21,562,700</u>
Total, Salaries and expenses	a/ <u>138,847,090</u>	<u>139,320,000</u>
Salaries and expenses (Special foreign currency program)	b/ <u>12,056,500</u>	<u>15,131,500</u>
State Experiment Stations:		
Payments to States and Puerto Rico	31,553,708	32,553,708
Penalty mail	<u>250,000</u>	<u>250,000</u>
Total, State Experiment Stations	<u>31,803,708</u>	<u>32,803,708</u>
Construction of facilities	<u>- -</u>	<u>900,000</u>
Total (excluding permanent appropriation)	a/ <u>182,707,298</u>	<u>188,155,208</u>

a/ Excludes reappropriation of \$1 million of 1959 unobligated balances available for labor at research field stations under cooperative agreements, contracts, or direct employment.

b/ Represents the dollar equivalent of allocations of foreign currencies by the Budget Bureau. Obligations of foreign currencies in U. S. dollar equivalents are estimated at \$21,917,831 in fiscal year 1960.

Summary of Appropriations, 1960, and Estimates, 1961

Appropriation Item	Appropriated, 1960	Budget Estimates, 1961	Increase (+) or Decrease (-)
Salaries and expenses:			
Research	\$67,721,590	\$68,981,700	+\$1,260,110
Plant and animal disease and pest control	49,800,600	48,775,600	-1,025,000
Meat inspection	21,324,900	21,562,700	+237,800
Total, Salaries and ex- penses	a/138,847,090	139,320,000	+472,910
Salaries and expenses (Special: foreign currency program) ..	b/ 12,056,500	15,131,500	+3,075,000
State Experiment Stations:			
Payments to States and Puerto Rico	31,553,708	32,553,708	+1,000,000
Penalty mail	250,000	250,000	- -
Total, State Experiment Stations.....	31,803,708	32,803,708	+1,000,000
Construction of facilities ..	- -	900,000	+900,000
Alterations and improvements, animal quarantine station, Clifton, N. J. (permanent)...	30,000	- -	+30,000
Total	a/182,737,298	188,155,208	+5,417,910
Deduct permanent appropriation:	30,000	- -	-30,000
Total (excluding permanent appropriation)	182,707,298	188,155,208	+5,447,910

a/ Excludes reappropriation of \$1 million of 1959 unobligated balances for labor at research field stations.

b/ Represents the dollar equivalent of allocations of foreign currencies by the Budget Bureau. Obligations of foreign currencies in U. S. dollar equivalents are estimated at \$21,917,831 in fiscal year 1960.

TRANSFER IN 1961 ESTIMATES

Since 1942 all library activities of the Department, both in Washington and the field, have been provided by the U.S. Department of Agriculture Library. With the substantially expanded programs in recent years, the Library has been unable to fully meet the needs of research personnel and other field employees for library services. In view of the seriousness of this problem, the Department conducted a study of library services available to, and needed by, its field employees. This study indicated an urgent need to strengthen field library services.

Therefore, effective July 1, 1959, the direct administration of field library activities was transferred from the Department Library to the agencies of the Department requiring such services. Accordingly, the administration of library services supporting research activities at the four ARS utilization research laboratories at Albany, California; New Orleans, Louisiana; Peoria, Illinois; and Wyndmoor, Pennsylvania, has been assigned to the Agricultural Research Service. The Director of the Library will continue to prescribe library policy, standards, and procedures for the conduct of all field library services, and will exercise such controls as are needed to coordinate library services in the Department and avoid duplication of effort. The new arrangement will enable the Agricultural Research Service to strengthen field library services to more effectively support its programs, and hereafter to correlate library services with current program needs.

During fiscal year 1960 the Agricultural Research Service is providing field library services to its own employees with funds transferred from the Library. The 1961 Budget proposes a transfer in the estimates of \$49,100 from "Salaries and expenses, Library," to "Salaries and expenses, Agricultural Research Service." This transfer represents the amount previously included in the Library appropriation for providing library services to the Agricultural Research Service at the four utilization research laboratories.

These actions were discussed with the House and Senate Committees on appropriations during the hearings on the 1960 estimates, and were concurred in by both committees (House Report, page 29; Senate Report, page 12).

(a) Salaries and Expenses

	<u>Research</u>	<u>Plant and Animal Disease and Pest Control</u>	<u>Meat Inspection</u>	<u>Total</u>
Appropriation Act, 1960	\$67,722,490	\$49,800,600	\$21,324,900	\$138,847,990 ^{a/}
Activities transferred in 1961 estimates:				
To "Salaries and Expenses, Agricultural Marketing Service," for marketing research	-50,000	- -	- -	-50,000
From "Salaries and Expenses, Library" for field library services ...	49,100	- -	- -	49,100
Base for 1961	67,721,590	49,800,600	21,324,900	138,847,090 ^{a/}
Budget Estimates, 1961	68,981,700	48,775,600	21,562,700	139,320,000
Increase or Decrease	<u>\$1,260,110</u>	<u>-1,025,000</u>	<u>\$237,800</u>	<u>\$472,910</u>

^{a/} Excludes reappropriation of \$1 million of 1959 unobligated balances for labor at research field stations.

SUMMARY OF INCREASES AND DECREASES, 1961

Research:

A net increase of \$1,260,110 consisting of:

Decrease due to elimination of non-recurring amounts provided in 1960 for construction of laboratories and improvement of facilities	-3,150,000
Decrease due to providing in the direct appropriation to General Services Administration for certain leasing costs now paid from this appropriation	-8,990
Increase for staffing and operating National Animal Disease Laboratory, Ames, Iowa in 1961 (portion applicable to research program)	\$805,600
Increase for intensive research to develop chemicals and biological measures for use in agriculture which will reduce or avoid hazards from pesticide residues	\$1,502,800
Increase for economic research to determine alternative systems of farming to enable feed-grain and livestock farmers to adjust more readily to market demands	\$100,700
Increase of \$1,512,800 for <u>utilization research</u> as follows:	
Research to increase the industrial use of cereals grains (in addition, it is proposed to redirect work in the present farm research program to the extent of \$700,000 to place greater emphasis on this utilization research)	\$506,600
Research on cotton to develop new and improved textiles and processes (\$503,000) and on wool to develop new types of yarns from coarse wool (\$100,700)	\$603,700

Research - Continued

Research on castor oil to develop materials for use in solid fuels and other products and to improve the utilization of castor meal	\$100,700	
Research to expand or find new uses for animal fats	\$301,800	\$1,512,800
Increase for employee health benefit costs pursuant to Public Law 86-382		<u>\$497,200</u>
Net increase for research		<u>\$1,260,110</u>

Plant and Animal Disease and Pest Control:

A net decrease of \$1,025,000 consisting of:

Increase for regulatory activities to carry out on a full year basis the Department's responsibilities under the amendment to the Federal Insecticide, Fungicide, and Rodenticide Act (P.L. 86-139), approved August 7, 1959	\$100,700	
Increase for plant quarantine protection services	\$504,600	
Increase for staffing and operating National Animal Disease Laboratory, Ames, Iowa in 1961 (portion applicable to control programs)	\$201,400	
Decrease in animal disease control and eradication programs (\$1,250,000 for brucellosis eradication and \$850,000 for screwworm eradication)	-2,100,000	
Decrease due to providing in the direct appropriation to General Services Administration for certain leasing costs now paid from this appropriation	-38,300	
Increase for employee health benefit costs pursuant to Public Law 86-382	\$306,600	
Net decrease, Plant and Animal Disease and Pest Control		<u>-1,025,000</u>

Meat Inspection:

Increase for employee health benefit costs pursuant to Public Law 86-382	<u>\$237,800</u>
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PROJECT STATEMENT

Project	1959	1960 (estimated)	Increase or Decrease		1961 (estimated)
			Health Benefit Costs (P.L. 86-382)	Other	
1. <u>Research:</u>					
a. <u>Farm research:</u>					
(1) Animal hus- bandry	\$5,307,620	\$5,337,000	\$44,600	\$438,100	\$5,419,700
(2) Animal dis- ease and para- site	7,051,791	6,862,900	450,000	4875,600	7,788,500
(3) Crops	13,810,951	14,707,890	4113,610	-1,151,600	13,669,900
(4) Entomology	5,676,960	7,793,200	443,500	-1,235,300	6,605,900
(5) Soil and water conser- vation	7,241,546	8,192,000	462,190	-130,290	8,123,900
(6) Farm eco- nomics	2,910,856	2,941,900	421,300	473,800	3,037,000
(7) Agricultural engineering .	2,277,847	2,529,300	418,200	455,300	2,602,800
Total, farm research ...	44,277,571	48,369,190	4353,400	-1,474,890	47,247,700
b. <u>Utilization research and development:</u>					
(1) Cereal and forage crops .	3,047,307	3,092,600	421,000	41,206,600	4,320,200
(2) Cotton and other fibers .	3,314,262	3,289,600	424,000	4603,700	3,917,300
(3) Fruits and vegetables ..	2,558,943	2,628,300	417,300	- -	2,646,100
(4) Oilseeds ..	1,903,363	1,957,300	414,200	4100,700	2,072,200
(5) New and special plants:	1,660,781	1,614,700	411,300	- -	1,626,000
(6) Poultry, dairy, and animal pro- ducts	3,302,219	3,533,700	425,300	4301,800	3,860,800
Total, utili- zation re- search and development .	15,786,875	16,116,700	4113,100	42,212,800	18,442,600

(Continued on next page)

Project	1959	1960 (estimated)	Increase or Decrease		1961 (estimated)
			Health Benefit Costs (P.L.86-382)	Other	
c. <u>Home economics research:</u>					
(1) Human nutrition	1,087,459:	1,069,400:	\$8,500	\$25,000	1,102,900
(2) Household economics ...	623,156:	646,800:	\$5,300	- -	652,100
(3) Clothing and housing	433,173:	431,000:	\$3,200	- -	434,200
Total, home economics research ...	2,143,788:	2,147,200:	\$17,000	\$25,000	2,189,200
d. <u>Administration of payments to States, and research in Alaska, Puerto Rico, and Virgin Islands:</u>					
(1) State experiment stations	314,223:	342,500:	\$6,800	- -	349,300
(2) Research in Alaska, Puerto Rico, and Virgin Islands:	762,084:	746,000:	\$6,900	- -	752,900
Total, Administration of payments to States, and research in Alaska, Puerto Rico, and Virgin Islands	1,076,307:	1,088,500:	\$13,700	- -	1,102,200
Total, Research .	63,284,541:	67,721,590:	\$497,200	(1) \$762,910	68,981,700
2. <u>Plant and Animal Disease and Pest Control:</u>					
a. <u>Plant disease and pest control:</u>					
(1) Plant pest control	15,730,396:	18,760,200:	\$85,200	\$84,500	18,929,900
(2) Plant quarantine	5,425,848:	5,439,500:	\$47,600	\$499,800	5,986,900
Total, plant disease and pest control	21,156,244:	24,199,700:	\$132,800	\$584,300	24,916,800

Project	1959	1960 (estimated)	Increase or Decrease		1961 (estimated)
			Health Benefit Costs (P.L. 86-382)	Other	
b. <u>Animal disease and pest control:</u>					
(1) <u>Animal disease control and eradication</u>	28,245,023	23,972,000	4159,600	-2,117,300	22,014,300
(2) <u>Animal inspection and quarantine</u>	1,779,264	1,628,900	414,200	4201,400	1,844,500
Total, Animal disease and pest control .	30,024,287	25,600,900	4173,800	-1,915,900	23,858,800
Total, Plant and Animal Disease and Pest Control	51,180,531	49,800,600	4306,600	(2) -1,331,600	48,775,600
3. <u>Meat Inspection</u> ..	20,363,752	21,324,900	4237,800	- -	21,562,700
4. <u>Special Fund</u> ...	- -	1,000,000	- -	(3) -1,000,000	- -
Total, Obligations ^{a/}	134,828,824	139,847,090	41,041,600	(4) -1,568,690	139,320,000
Unobligated balance	3,220,223	- -	- -	- -	- -
Deduct reappropriations for completion of soil and water laboratories in 1959; and for Special Fund in 1960	-346,000	-1,000,000	- -	41,000,000	- -
Total employee health benefit costs (P.L. 86-382):	<u>[- -]</u>	<u>[- -]</u>	<u>41,041,600</u>	<u>436,000</u>	<u>1,077,600</u>
Total available (excluding reappropriations) or estimate	137,703,047	138,847,090	41,041,600	-568,690	139,320,000
Transfer in 1961 estimates:					
From "Salaries and Expenses, Library"	-48,225	-49,100			
To "Salaries and Expenses, Agricultural Marketing Service"	- -	450,000			

Project	1959	1960 (estimated)	Increase or Decrease		1961 (estimated)
			Health	Benefit	
			Costs	Other	
Transfer in 1960 estimates from "Diseases of Animals and Poultry"	-1,020,432	- -			
Transferred from "Conservation reserve program, Commodity Stabilization Service"	-7,881,500	- -			
Total appropriation	128,752,890	138,847,990			

a/ Obligations for 1959 include \$527,557 obligated in 1958 under the advance procurement authorization (P. L. 85-386). Comparable applied costs are \$136,064,692 for 1959, \$137,611,590 for 1960, and \$141,710,000 for 1961. The differences are due primarily to variations in construction contracts awarded compared with work completed.

INCREASES AND DECREASES

Research

(1) A net increase of \$762,910 is proposed consisting of:

(a) Decrease of \$3,150,000 due to elimination of non-recurring items provided in 1960 for construction of laboratories and other facilities as follows:

Crops laboratory, Logan, Utah

- \$600,000

This amount was provided for 1960 for construction of a laboratory at Logan, Utah, for research on sugar beets, nematodes, and forage grasses. It is expected that a contract for the construction of this laboratory will be signed before June 30, 1960.

Development of physical facilities at National Arboretum

- 350,000

The 1960 appropriation provided an increase of \$200,000 to bring the total funds available for the development of physical facilities to \$434,250. It is expected that these funds will provide for completion of the major needs for buildings, greenhouses, gateways, roads, etc., except for the construction of the headquarters building. After the proposed reduction, \$379,620 will remain available for operation and maintenance, for development and care of new plantings, and for guard service.

Boll weevil research facilities, State College, Mississippi -1,100,000
It is expected that a contract will be awarded before June 30, 1960 for the construction of these facilities for which funds were included in the 1960 appropriation.

Corn and other grain insect research facilities -1,100,000
The 1960 appropriation provided for the construction of two such laboratory facilities at a cost of \$550,000 each. One of the laboratories is to be located at the Coastal Plains Experiment Station, Tifton, Georgia, and the other at Brookings, South Dakota. It is expected that contracts will be signed for the construction of these facilities before June 30, 1960.

Total decrease -3,150,000

(b) Decrease of \$8,990 under the farm research project, "Soil and Water Conservation Research" due to the provision in the direct appropriation to General Services Administration for certain leasing costs now paid from this appropriation.

Note: A total decrease of \$47,290 is proposed due to transferring such costs to the General Services Administration. This decrease is distributed by sub-appropriations as follows:

Research	- \$8,990
Plant and Animal Disease and Pest Control	<u>-38,300</u>
Total	<u>-47,290</u>

For convenience, a single explanation of the decrease is presented.

Decrease: In the fiscal year 1961, the General Services Administration will assume the cost of twenty-seven leases heretofore paid from this appropriation for the rental of office space occupied by the Agricultural Research Service in sixteen states. The annual rental of these properties now totals \$47,636. This proposal provides solely for a different method of financing these rentals and will not affect the nature or scope of the work. The facilities continue to be needed for program operations.

(c) Increase of \$805,600 under the farm research project, "Animal Disease and Parasite Research", to provide for operation in 1961 of the National Animal Disease Laboratory at Ames, Iowa.

Note: A total increase of \$1,007,000 is proposed for this purpose distributed as follows:

Research:	
Animal disease and parasite research	\$805,600
Plant and animal disease and pest control:	
Animal inspection and quarantine	201,400
Total	<u>1,007,000</u>

For convenience, a single justification of the total increase is presented at this point.

Need for Increase: The Supplemental Appropriation Acts of 1956 and 1957 provided \$16,500,000 for the construction of a National Animal Disease Laboratory. This action was necessary because the impracticability of providing adequate safeguards had forced the closing of research and control work on animal and poultry diseases in the East Wing of the Department's Administration Building in Washington, D. C., as well as many important related lines of work at Beltsville, Maryland, and elsewhere.

The new facilities under construction at Ames, Iowa will be completed in time for full scale operations during the latter part of fiscal year 1961. At that time work at Beltsville on infectious and metabolic diseases, along with laboratory phases of animal and poultry disease control programs, will be moved to Ames. Work on many important diseases which has been held in abeyance for several years will be reinstated. The new facilities will provide for basic and applied research which the Department has been unable to conduct or initiate for several years, as well as laboratory work basic to regulatory activities.

Research on livestock diseases now under way should be expanded in these new facilities and new lines of basic and applied research should be undertaken. Livestock and livestock products provide farmers from 55 to 58 percent of their annual cash income. Annual losses from infectious and non-infectious livestock diseases are estimated at more than \$1.8 billion. This estimate does not include cost of pharmaceuticals, disinfectants, etc. There are 75 known domestic diseases affecting cattle and swine which require development of additional information for their successful or less expensive control. In addition, present information on a number of poultry diseases is inadequate for effective control and eradication. Some of these diseases are transmissible to man. The principal diseases which affect farm animals and poultry are as follows:

Anthrax
Atrophic rhinitis
Blackleg
Blue comb
Blue tongue
Brucellosis
Calf diptheria
Chronic respiratory disease
Coryza
Enteritis
Enzootic abortion
Erysipelas
Foot rot
Fowl cholera
Hog cholera
Infectious keratitis
Infectious sinusitis
Infectious synovitis
Infertility
Johne's disease

Leptospirosis
Listerellosis
Mastitis
Malignant edema
Mucosal disease complex
Mycotic diseases
Newcastle disease
Ornithosis
Pox
Pneumonia complex
Q fever
Red water disease
Salmonellosis
Scrapie
Shipping fever
Swine influenza
Tuberculosis
Vesicular stomatitis
Vesicular exanthema
Vibriosis

Regulatory activities in the new facilities will include the reestablishment in the new facilities of work on diagnosis of animal and poultry diseases as they are encountered in field control activities and of diseased conditions in materials received from meat packing plants which would aid in control of diseases. They would also include chemical analyses and bacteriological examinations of dips and disinfectants to determine their efficiency and reliability for use in disease control programs. Other diagnostic activities include epidemiological investigations of field outbreaks of diseases, and technical training responsibilities. As research findings result in new diagnostic agents or biologics, production methods will be developed in the pilot plant which is being provided in the new facilities.

Tests will be made of animal biologics produced commercially to determine their purity and potency as required by the Virus-Serum-Toxin Act. That Act places responsibility on the Department to prevent the production and interstate distribution of veterinary biologics that are worthless, contaminated, dangerous or harmful. Enforcement of the Act has been limited almost exclusively to plant inspections because facilities heretofore available have not been adequate to carry out testing of these products on a fully satisfactory basis. Recently the situation has become acute because of the steadily increasing number and kinds of biologics proposed for licensing. The development of new and revolutionary products is overwhelming existing methods for licensing and inspection. Reports of field outbreaks of diseases or other unsatisfactory results following use of biologics which have been investigated recently indicate that systematic testing procedures should be inaugurated as soon as possible. The findings in these problem cases show a need for uniform and sound evaluation procedures before release of biologics for use by producers.

The new laboratory facilities will contain safety features and security measures similar to those at the Plum Island laboratory where work on foot-and-mouth and other foreign diseases is now conducted. They are designed to prevent escape of diseases, to protect workers, and to prevent cross-contamination of experiments and tests. Some of these special features include (1) decontamination of effluent air and sewage, (2) incineration of carcasses of all experimental animals and solid wastes, and (3) sterilization of clothing and laboratory equipment and materials. These new features which have not heretofore been available for these programs will require increased funds for operations.

Plan of Work: Research will include investigations to develop further information on (1) diseases caused by bacteria, fungi, rickettsia, and viruses, and (2) metabolic diseases. They would cover characteristics of disease-producing agents, mechanisms of infection, modes of transmission, and methods of diagnosis and treatment, all of which are essential for establishing sound methods of disease prevention, control, or eradication.

Regulatory activities would include laboratory diagnosis of diseases, tests of dips and disinfectants, pilot plant development of diagnostic agents and biologics resulting from research on diseases, field epidemiological studies, and training responsibilities. In addition, a continual investigation and evaluation of different procedures and methods for testing new and existing veterinary biologics would be instituted, with spot checking of biologics from time to time to assure the release of safe and potent commercial products.

To carry out the program it will be necessary (1) to establish safety procedures for workers and experiments; (2) to maintain supplies of small and large experimental animals, including pre-experimental quarantine to assure availability of clean animals; (3) provide for engineering and plant management, such as services for special refrigeration, electrical systems, utilities, farm operation, etc.; (4) to manufacture tissue culture and media for experiments and tests; and (5) to provide for such laboratory services as laundry, storage, washing and sterilization of glassware, maintenance and delivery of laboratory supplies and equipment, etc.

With the new laboratory available for operation during the latter part of fiscal year 1961, it will be possible to move current work to the new facilities and to recruit additional staff for the laboratory. It will be necessary to meet moving costs, provide for operation of the physical facilities, and incur other expenses involved in opening the new laboratory. The following tabulation distributes the funds for fiscal year 1961, including the proposed increase, by major activities:

	<u>Animal Disease Research</u>	<u>Animal Disease and Pest Control</u>	<u>Total</u>
Current funds available for transfer to new facilities	\$960,000	\$440,000	\$1,400,000
Proposed increase, Fiscal Year 1961	<u>305,600</u>	<u>201,400</u>	<u>1,007,000</u>
Total	<u>1,765,600</u>	<u>641,400</u>	<u>2,407,000</u>

The increase proposed for 1961, together with the funds presently available, will enable the Service to carry on important research and diagnostic work under way in the new laboratory. However, it will not permit placing the facility on a full-scale operational basis.

(d) An increase of \$1,502,800 to provide for intensive research to develop chemicals and biological measures for use in agriculture which will reduce or avoid hazards from pesticide residues.

Note: The total increase of \$1,502,800 would be distributed by research projects as follows:

Entomology Research	\$1,102,800
Animal Husbandry Research	75,000
Animal Disease and Parasite Research	100,000
Crops Research	100,000
Agricultural Engineering Research	100,000
Human Nutrition Research	<u>25,000</u>

Total	<u>1,502,800</u>
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For convenience, a single justification of the total increase is presented at this point.

Need for Increase: American farmers and ranchers have long been accustomed to using pesticides against the many different insects and other pests that damage or destroy crops or adversely affect livestock. Losses from insect pests are estimated at over \$4 billion annually. No crop basic to the agricultural economy of the United States can be grown profitably without protection from these pests. Chemicals now provide the chief means of controlling these losses but there is growing apprehension by the general public, health authorities, conservationists, canning industry, beekeepers, and others over known or potential hazards associated with their use. Such hazards include contaminating human and animal foods, or changing their flavor, endangering livestock and wildlife including pollinating and other beneficial insects, and affecting the soil or plants grown in the soil. There is urgent need for increased research to eliminate such hazards.

Economical, effective and safe chemicals are needed to assure satisfactory control of insects. Current legislation provides that the Food and Drug Administration establish residue tolerances for pesticides or exemptions from tolerances, to assure the availability of foods free from harmful chemical contamination. The Department of Agriculture has the responsibility for determining whether particular pesticides will leave residues not in excess of proposed tolerances when used as directed. Residue research by this Department must be intensified to develop assay methods for pesticides and metabolites as basis for recommendations for use of these chemicals. Many chemical control measures now available cannot be recommended because of inadequate information on the significance of residues that may result from their use. This problem is illustrated by the following examples:

1. Several new insecticides give excellent control of insects that attack livestock but the Department is unable to recommend them to dairymen for controlling insects on dairy cows without the risk of residues appearing in milk.
2. Although several chemicals are extremely effective and economical for controlling grasshoppers, there is a danger that their use on crops to be grazed by dairy animals or animals being fattened for slaughter will leave residues in milk or meat or that such use will endanger fish and wildlife.
3. The canning industry is concerned over pesticide residues which may occur in processed foods intended for human consumption. In addition, this industry has realized about \$3.5 million a year from the sale for livestock feed of such byproducts as corn husks, pea vines, beet tops, and apple pomace. If current restrictions on feeding these byproducts because of residues are not overcome, this revenue will be lost permanently and it will cost the industry an additional \$1 million annually to dispose of these byproducts.
4. Private, state, and federal conservation groups and others claim that extensive use of insecticides and pesticides by growers and in large scale eradication programs are endangering wildlife, pollinating insects, and other beneficial organisms. Many of these claims cannot be refuted entirely with existing information.

To meet this growing problem, a comprehensive expanded research program is urgently needed to develop (1) new methods to control insects which do not involve the use of chemicals, and (2) safer chemicals for pest control and improved methods for their application and use. The development of more biological controls and improved pesticides and methods for their application offers great possibilities for reducing the cost of pest control.

Biological methods offer the best possibilities for control of destructive insect pests by non-chemical procedures. Biological agents alone, however, cannot at present be counted on to solve our pest control problems. In most instances, the host and the controlling agents reach a natural balance at a level which permits greater crop losses than the grower can afford. Therefore, farmers are still primarily dependent on economical, effective, and safe chemicals to assure satisfactory pest control essential to produce the quantity and quality of crops and livestock necessary to meet the Nation's needs.

Some insecticides used on animals or on plants consumed by them produce residues which undergo chemical changes in the body and produce other compounds, called metabolites, that may be more toxic than the original insecticide. Basic research is needed to gain a clear understanding of these changes. Careful checking for residues in food products, such as meat, milk and eggs, needs to be intensified to insure the safety of farm production practices. Since some pesticides affect flavor, texture, or other qualities of food products, research is needed to determine the effects of pesticide applications upon these qualities and upon consumer acceptance.

Several crops offer low market potential for pesticides because of the relatively small acreage grown and industrial companies have not indicated interest in conducting pesticide research on these crops so as to meet the labeling requirement of Public Law 518, 83rd Congress. Certain chemicals that were in use prior to passage of this Act still present some residue problems because the companies concerned have not initiated residue studies since they are not protected by patents. Basic research on the fate of chemicals in plants and soils is needed to fill an important gap in the present industrial and public agency programs designed to protect the health of man and animals against harmful residues.

Additional Research Proposed: Research would be intensified to develop chemicals and biological measures for use in agriculture which would reduce or avoid hazards from pesticide residues. In the field of chemical controls, specific lines of research would include studies to:

1. Find and develop new, safer pesticides and repellents for use on livestock and forage crops to prevent residues in milk and to avoid or minimize residues in meat and establish safe amounts that may be applied for pest control.
2. Develop attractants to use as baits with insecticides and thereby reduce the amount of insecticides otherwise needed for insect control. This will include basic research on nutrition of insects, factors which lure insects to the plant or animal nest and on sex and other attractants such as light and sound. The medfly was eradicated from Florida with a bait-insecticide combination which made it possible to obtain control with one-fourth of the insecticide which would otherwise have been required.
3. Develop information on the metabolites or breakdown products resulting from the use of pesticides and develop more precise chemical and bio-assay methods for determining minute amounts of pesticide residues and their metabolites on harvested crops and animal products.

4. Determine toxicity and safe amounts of promising pesticides, herbicides, growth-regulators, nematocides, fungicides and other compounds that may be applied to crops or soils for pest control.
5. Conduct animal feeding and other tests under controlled conditions to determine tolerance limits to pesticide residues and ways of producing animals within these limits. Determine the symptoms and specific diagnostic pathology for poisoning of livestock and poultry with pesticides and other chemicals, including hormones, tranquilizers and other such feed additives. Develop methods, criteria and procedures for estimating the hormone content of tissues. In these studies, veterinary surgical operations would be required periodically on cattle to sample the fat from inside the abdominal cavity and to obtain other biopsy samples for chemical tests after various periods of time and after the use of different pesticides on animals and on feed they consume.
6. Develop chemicals less harmful to pollinating insects and to the natural enemies of destructive insects and ways of integrating chemical control programs with biological control so as to permit maximum benefits from natural enemies of destructive pests.
7. Develop chemicals, through basic research, such as hormones, that would regulate the growth of insects, and be selective in action on them, but non-toxic to higher animals, plants, and soils.
8. Investigate the use of systemic insecticides in plants and animals; the absorption, movement and accumulation of such pesticides in plants and animals; and the type and extent of resulting residues.
9. Determine the effects of pesticide accumulations in soils on plants and soil organisms.
10. Develop new and improved equipment and methods for the application of pesticides either as sprays, dusts or granules to increase the efficiency and effectiveness of application and reduce the amount of pesticides required for control.
11. Expand palatability testing of foods exposed to pesticides affecting flavor and develop objective methods for evaluating other qualities, such as texture, color changes during cooking, and other altered characteristics likely to affect household use.

Additional research would also be conducted on biological controls which create no known hazard to man, animals, fish, wildlife and soil organisms. They include the use of insect diseases and parasites which are generally specific in action against destructive insects and cause little or no harm to bees and other beneficial insects. They also include the use of the sterilized male technique which has been successful in eradicating the screw-worm from the southeastern United States. Specific lines of research on biological controls would include studies to:

1. Find parasites and predators capable of controlling destructive insects and weeds, and develop ways of producing and liberating them in effective control programs. Biological control methods have been successful with the citrus black fly and the Klamath weed, and substantial benefits have resulted from importation of parasites to control the European corn borer, sugarcane borer, spotted alfalfa aphid, Japanese beetle, and many other insects.
2. Find bacteria, fungi, viruses, protozoa and other organisms useful for controlling pests and develop methods for applying them for control purposes.
3. Explore the use of the sterile male method of biologically controlling major destructive insects, a method which may have potential usefulness in controlling such pests as pink bollworm, tobacco and tomato hornworms, tobacco budworms, cotton bollworm, tropical fruit flies, cattle grubs, vector mosquitoes, peach tree borer, plum curculio, and sugarcane borer.

Plan of Work: The research would be conducted in cooperation with the State Agricultural Experiment Stations and industry at currently existing locations, where the problems occur. Cooperative relations would be maintained with the Food and Drug Administration, Public Health Service and other interested agencies.

(e) Increase of \$100,700 under the farm research project "Farm Economics" to determine alternate systems of farming to enable feed grain and livestock producers to adjust more readily to market demands.

Need for Increase: A major problem facing agriculture today is that of adjusting production to prospective markets. Excess production capacity is especially acute in feed grains and wheat. The feed grain-livestock problem is expected to be especially difficult in the next 5 to 10 years. Some land must be shifted from feed grain production to other lines or be less intensively employed. Careful appraisal of the nature of these adjustments is necessary.

Practical economic studies are needed to identify what farmers can do to change this situation and the costs and benefits of alternative programs that may be needed to encourage adjustment required to achieve a better balance between production and demand. This requires expanded analyses to identify the location of critical adjustment areas, determine the nature of the problems, and analyze the opportunities for adjustment. In feed grain and wheat areas, analyses are needed of opportunities for shifts of land and other resources from the production of feed grains and wheat to other uses and the associated effects that alternative systems of farming would have on output, incomes, costs, and size of farm.

Related studies of the costs and benefits of alternative measures will be necessary to provide guidance in formulation and modification of farm programs and policies.

Plan of Work: To provide needed economic data for appraising alternative systems of farming to enable feed grain-livestock farmers to adjust to market demands, studies are needed both at the national level and at the individual area level. These studies would be organized to:

1. Identify the changing magnitude of the feed grain-livestock adjustment problem, including analyses of technological factors affecting the output of feed grains and livestock, and the nature and location of the areas in greatest need of adjustment.
2. Analyze and develop in selected feed grain and wheat areas, alternative systems of farming that will bring about a better balance between production and demand, and appraise their effects on farm output, incomes, costs, and size of farm.
3. Analyze the costs and benefits of alternative programs to encourage the shifts that will provide balance between production and demand of feed grains and livestock. Attention in these studies will be given to developing information needed for the guidance of credit, extension, and research, as well as production adjustment programs.

(f) Increase of \$2,212,800 for utilization research consisting of an increase of \$1,512,800 in the appropriation and \$700,000 by redirection from farm research, as follows:

1. An increase of \$506,600 for "Cereal and Forage Crops" (the total increase is \$1,206,600 including \$700,000 by redirection from farm research as discussed on page 27) to develop means to increase industrial use of cereal grains.

Need for Increase: Cereal grains, especially wheat, corn, and grain sorghums continue to be the primary farm surplus problem. Production is likely to continue to be greater than utilization unless substantial additional outlets can be developed. The discovery and development of large, new or improved industrial uses for cereal grains offers the most fruitful means for using more of them. Essential to the attainment of this goal is an intensified program of research and development supported by comprehensive fundamental studies. Present knowledge indicates that initiation of research, or expansion of present work in the following fields holds much promise of success:

High-amylose starch and derivatives. The development through breeding research, of commercial corn hybrids with starch of 80 percent or more amylose (three times that of ordinary dent corn) is anticipated within the next few years. The availability of starch of this type at a price comparable to that of ordinary cereal starches would not only strengthen the position of starches in present outlets and expand their use in the paper and textile industries, but also should lead to new applications such as in packaging materials and coatings. To establish these uses, research is required to develop procedures for processing high-amylose corn, for producing amylose starch derivatives, and for modifying them to meet specific industrial needs.

Microbially produced insecticides and industrial chemicals. Such industrial chemicals as organic acids and enzymes, and such agricultural chemicals as antibiotics, growth-regulating substances, defoliating agents, and herbicides can often be produced more cheaply by fermentation processes than by other means. Exploration of the fermentation approach for producing these chemicals from grain should be intensified. Special attention should be given the development of processes for the mass production of infective microorganisms and spores for use in the control of insect pests. Successful methods for the production of microbial agents effective against such pests as the Japanese beetle, corn borer, alfalfa caterpillar, tobacco and tomato horn worms, nematodes, and cotton boll weevil would have excellent potential for utilizing appreciable quantities of grain.

Milling and milled products of wheat. Wheat flour and other mill fractions are among the most plentiful agricultural raw materials available at low cost. Cost is a principal

consideration in the use of any cereal product especially in industrial uses where it usually competes with synthetic products. There is intense interest in the flour-milling industry today concerning the potentialities of producing a variety of new food, feed, and industrial products from wheat by application of physical methods for the separation of wheat components. Full potentialities of these physical methods of separation should be explored for producing a range of starch-rich, protein-rich, bran-rich, and fiber-rich fractions. These fractions and their chemical modifications should be evaluated to assess and promote their industrial utility.

Supporting fundamental and exploratory research. Fundamental and exploratory research on the properties of cereal components has not been commensurate with the value and importance of cereal crops. As a result, too few facts are available to provide bases for conversion of cereal grains and their components into a wider range of industrial products. An expanded program of fundamental research is essential to advances in this field.

Plan of Work: The expanded program of research and development on cereal grains would include:

1. Development of industrial uses for high-amylose starch and its derivatives, industrial applications for purified amylose and its derivatives, and a practicable process for making purified amylose.
 2. Exploration of fermentation as an economic means for conversion of grain into microbial insecticides and into new or existing industrial and agricultural chemicals.
 3. Development of processes for efficient and economic separation of wheat into a variety of milled fractions adapted to food, feed, and industrial uses; and chemical modification of the fractions suited by reason of price and properties, to fit them better for specific industrial applications.
 4. Fundamental and exploratory chemical, physical, and microbiological research to support applied and development investigations, and to provide the basis for the discovery of new concepts, reactions, and principles leading to new processes and products.
2. Increase of \$603,700 under "Cotton and Other Fibers" composed of:
- a. An increase of \$503,000 to improve the quality of cotton textiles to strengthen the competitive position of cotton in textile markets.

Need for Increase: The success of synthetic fibers in recent years stems chiefly from quality improvements, and effective promotion rather than price. All of the non-cellulosic fibers are higher in price than cotton. Consumers demand high quality textile products with specialized properties for specific uses. Since

the situation with respect to competing fibers is not static, cotton must make considerable gains even to hold its present competitive position. To hold existing markets for cotton and to expand them, improvements that can be developed only through research must be made in such features as luster, warmth, resiliency, wash-and-wear, and resistance to wrinkling, soiling, rot, and burning.

Plan of Work: Specific research on cotton would include:

1. Development of wash-and-wear cotton fabrics that resist damage by chlorine bleaches. Promising preliminary results have been obtained with formaldehyde, the simplest and least expensive reagent found to give wash-and-wear properties. There is need to develop practical processing methods.
2. Development of cotton fabrics having both wet and dry wrinkle-resistance and crease recovery. Methods have been developed for wet crease recovery and smooth drying, but not for good dry crease recovery which is necessary to maintain smooth appearance while a garment is being worn.
3. Improvement of cotton yarn and fabric constructions for wash-and-wear use. Standard cotton fabrics have been developed over the centuries on the basis of utility and appearance. Modification of construction by changes in yarn and fabric structure can be achieved through research which will give optimum wash-and-wear performance and utility when resin treated, without adversely changing fabric appearance.
4. Development of wrinkle-resistance and wash-and-wear properties in cotton without impairing strength. Known treatments that impart these properties impair fabric strength. This in turn limits markets. Loss in strength is due to a number of complex inter-related factors that require research.
5. Investigations of the molecular structure of native, degraded, chemically modified, and treated cottons by newly developed infrared absorption spectroscopy to develop means for evaluating quickly and accurately the efficiency of new wash-and-wear treatments.
6. Development of a practicable and durable soil resistant treatment for cotton fabrics. Cotton is soiled with relative ease. Durable finishes are needed which are resistant to the combined effects of oily, wet, and dry soiling.
7. Intensified research aimed at establishing the relationship between fiber properties and spinning efficiency. Spinning limits are now specified on the basis of staple length rather than on the basis of all properties. By acquiring such information, a practical guide can be developed which will enable the cotton industry to spin American cotton more effectively.

8. Development of prototype equipment for automatically opening and blending cotton from different bales in desired proportions. New and better equipment for blending cotton is vital to quality in cotton textiles, especially in view of current harvesting and ginning practices which lead to wide variations in fiber quality within and between bales.
9. Adaptation of the aerodynamic brush cleaner (U.S. Patent 2,848,754) to standard cotton textile pickers. The increasing severity of ginning and mill cleaning practices has brought about a need for mill equipment that will clean cotton gently and efficiently without damaging the fiber. The design of the aerodynamic brush would be modified for installation in a conventional picker and a suitable trash ejection type orifice would be developed.

b. Increase of \$100,700 for research to develop new type yarns from coarse wool.

Need for Increase: Domestic wool production is principally in the coarser grades. Since these grades are unsatisfactory for the light-weight, soft fabrics demanded by consumers, foreign wools which are finer and lighter in color are imported for fine fabrics. Although coarse domestic wools can be used satisfactorily for carpet manufacture, they are still at an economic disadvantage because coarse carpet wools are duty free and can be obtained more cheaply through imports. Moreover, for economic reasons emphasis in American sheep production is on meat rather than on wool. Improvements in breeds have tended toward large animals that produce more meat and also more medium to coarse grades of wool.

To expand uses for domestic wools in quality fabrics, research is needed to find ways of spinning coarse or medium grades into finer yarns. This is a difficult technological problem and for this reason it has not been widely investigated by the processing industry.

Plan of Work: Methods will be developed for making high quality yarns by uniform blending of fine and coarse wools, and of coarse wools with chemically modified wools. When methods for making suitable yarns have been developed, new types of fabrics will be made and evaluated. The studies will include research to develop new finishing operations to provide required fabric softness.

3. Increase of \$100,700 under the project "Oilseeds" to expand research on castor oil to develop materials for solid fuels, and flexible or molded products; and to improve the utilization of castor meal.

Need for Increase: Castor beans would be a good replacement crop if extended uses could be developed for castor products. Castor oil, the primary product from castor beans, is used almost exclusively for industrial purposes. The meal or pomace is now used only as a

fertilizer. Castor oil contains about 90% ricinoleic acid, the only hydroxy-fatty acid present in sufficient quantity in any naturally occurring oil to be of economic importance. Its hydroxyl group makes it most responsive to chemical modification. A particularly attractive area is utilization of castor oil in urethane polymers to produce rigid or elastic foamed plastics. Production of polyurethanes, now largely derived from petrochemicals, rose from about 1 million pounds in 1955 to an estimated 69 million in 1959. By virtue of its unique nature and its price, castor oil presents unusual opportunities for utilization in the production of polyurethanes of all types.

Research presently under way on utilization of castor oil in the production of light-weight polyurethane foams should be expanded to develop solid urethane polymers from castor oil for use as solid plastics and rocket fuels. Extensive research is needed to develop the techniques for producing these materials and for evaluating their utility for specific purposes.

Castor meal comprises about half the weight of the beans. This meal is rich in protein but contains potent allergens, toxic proteins and the alkaloid ricinine which limit the use of the meal. Research now under way on the isolation and identification of the allergenic components should be expanded and broadened to include research on methods for detoxifying the meal so as to make it suitable for use as a feed, and to devise means of separating individual components which might have industrial utility.

Plan of Work: Solid or rubbery type polymers for use in rocket fuels and solid plastics for structural elements will be prepared from castor oil or suitable derivatives of castor oil by reaction with various chemicals, particularly diisocyanates. The castor oil used may include oil which has been hardened, for example, by hydrogenation, or otherwise modified chemically. The effect of reinforcing agents such as carbon black and of plasticizers will also be studied. The solid or rubbery polymers will be tested for a full range of commercially important properties. In this way evaluation may be made of their potential utility for application in such large volume products as footwear, gaskets, diaphragms, belts, gears, bushings, compositions for electrical components, and caulking compounds.

Castor meal will be fractionated into various protein parts. The fractions obtained will be subjected to tests with small experimental animals to determine their biological activity. The information thus obtained will be used as a guide to develop means of detoxifying the meal by treatment with suitable reagents.

4. Increase of \$301,800 under the project "Poultry, dairy, and animal products" for research to expand or find new uses for animal fats in the field of lubricants, plastics and plasticizers and soap-detergent combinations.

Need for Increase: During the past five years the annual production of inedible tallow and grease has averaged almost 3 billion pounds, which is more than 1-1/4 billion pounds in excess of domestic needs. Formerly practically all inedible animal fats went into soap

production. This outlet has declined from a high of about 1-1/2 billion pounds per year at the end of the last war to about 700 million pounds in 1958.

Research has already provided outlets for substantial amounts of these surplus fats and derivatives in animal feeds, tin-plate manufacture, and plastics. Use in animal feeds now approaches 500 million pounds per year. Use in plasticizers promises to attain 100 million pounds annually. Surveys of other possible uses indicate that new research in the field of detergents, lubricants, plastics and plasticizers would produce new outlets. For example, soap has certain advantages over present detergents. It is better in soft water, can be produced in bar form, and is more effective in keeping soil suspended in water. Commercial laundries are particularly interested in combinations of soaps and detergents which would utilize the advantages of both. Research is needed to develop such products.

Exactng fluidity requirements for lubricants for jet engines and other new types of machinery indicate that animal fats or derivatives may be a good source for lubricant additives or lubricant bases. Mineral oils are now the chief source but there are indications that the inherent nature of animal fats may provide more stable products.

There is very good potential for large volume uses of animal fats in these substantial and rapidly growing fields if research can be expanded to permit exploration of additional promising leads.

Plan of Work: It is proposed to expand research especially along the following lines:

1. Development from animal fats of new chemical derivatives that possess the unique properties required by industry for softening plastics intended for specific uses.
2. Development from animal fats of lubricant additives and lubricant bases to fill the need for lubricants having the special properties required for modern machinery operation.
3. Investigation of various combinations, blends and mixes of soap and detergents derived from animal fats to develop more effective economical cleansing agents.

Redirection of Research

In order to place greater emphasis on utilization research on crops in surplus and on the development of industrial uses for such crops and on new crops as replacements, it is proposed to redirect work in the present farm research program to the extent of \$700,000. The redirection would be made in farm research activities as follows:

<u>Project</u>	<u>Amount</u>
Animal husbandry research	\$36,900
Animal disease and parasite research	30,000
Crops research	301,600
Entomology research	138,600
Soil and water conservation research	121,300
Agricultural engineering research	44,700
Farm economics research	26,900
Total	<u>700,000</u>

These reductions would be accomplished (1) by closing small or isolated stations, or terminating lines of work at locations where financing is inadequate for effective research and (2) by reducing research related to production of crops in surplus - especially production research on cotton, wheat, and corn.

Plant and Animal Disease and Pest Control

(2) A net decrease of \$1,331,600 is proposed consisting of:

(a) Increase of \$100,700 under the project, "Plant pest control," to carry out on a full-year basis the Department's responsibilities under the amendment to the Federal Insecticide, Fungicide and Rodenticide Act (P.L. 86-139), approved August 7, 1959.

Need for Increase: On August 7, 1959, the Federal Insecticide, Fungicide and Rodenticide Act was amended to make four additional "economic poisons," nematocides, plant regulators, defoliants and desiccants, subject to the same regulatory controls on labeling and marketing as applied to insecticides, fungicides, rodenticides, and herbicides. It also placed these additional items under the pesticides chemical amendment to the Federal Food, Drug, and Cosmetic Act (P.L. 518, 83d Congress) insofar as residues in or on raw agricultural commodities may be involved. The legislation required the Department to begin registration immediately of the newly regulated products placed on the market subsequent to August 7, 1959, and also of any such products introduced into commercial markets between January 1, 1958 and August 7, 1959 if their use results in residues. All newly regulated products, including those marketed prior to January 1, 1958, must be registered prior to March 5, 1961 or such earlier date as may be determined by the Secretary.

To carry out the enforcement provisions of the Act, it is necessary to take samples, make analyses to insure that the ingredients are of the kind and in the amount stated on the label, and conduct extensive tests to determine that the products can be used safely and effectively when label directions are followed.

More than 4,000 products in the new categories are now on the market and it is expected that about 1,200 more will be introduced each year.

Experience has shown that for each new product there is an average of three registrations. It is essential that registration activities be handled promptly to meet the requirements of the law and to avoid disruption in the trade.

With the approval of the amendment on August 7, 1959, work relating to the additional regulatory activities in fiscal year 1960 was initiated with a transfer of \$250,000 from the screwworm eradication project under "Animal disease control and eradication" since progress under that eradication program has been more rapid than anticipated. To meet the costs for a full year in 1961, an increase of \$100,700 would be needed.

(b) Increase of \$504,600 under the project "Plant Quarantine" for inspection services needed to protect the United States against the constant threat of entry of foreign pests due to the rapid increase in foreign travel and commerce.

Problem and Need for Increase: Foreign traffic has increased to the point where it is no longer possible to provide adequate plant

quarantine coverage with the available inspection force. Additional funds are needed for increased inspection service because the continued expansion in both commercial and personal travel has increased the threat of foreign pests being introduced into the United States. Many of the existing ports of entry are understaffed and plant quarantine coverage is urgently needed at several new ports where such services cannot now be provided. Expanded travel and commerce has forced the scheduled opening of these new ports of entry, some during the current fiscal year. It is impossible to cover them without reducing inspection staffs at other points below minimum needs. Adequate inspection coverage of traffic into the United States is fundamental to the protection of American agriculture.

The increase in the inspection workload and the associated increase in interceptions of new pests brought to our borders is shown in the following table:

<u>Inspections:</u>	<u>F.Y. 1958</u>	<u>F.Y. 1959</u>	<u>F. Y. 1960 (Estimated)</u>	<u>F. Y. 1961 (Estimated)</u>
Airplanes inspected ..	121,231	133,723	147,500	155,000
Ships	55,348	58,995	62,900	64,000
Vehicles from Mexico .	19,434,535	21,119,747	22,951,000	25,000,000
Pieces baggage inspected	17,277,049	21,331,180	26,911,700	32,250,000

Interceptions:

Plant material	311,391	319,713	328,300	335,000
Plant pests	18,198	25,296	35,000	43,000

The opening of the St. Lawrence Seaway is resulting in a material increase in foreign shipping through those ports with the concomitant danger of plant pest entry directly into major agricultural areas. Statehood for Alaska and Hawaii has added new impetus to traffic between the continental United States and the new States. Commercial and military overseas plane flights using Alaskan and Hawaiian terminals are steadily rising. In Alaska, there is further danger of animal disease entry threatening its abundant wild game as well as its domestic livestock. The upsurge in traffic from Mexico has resulted in the opening of two new ports of entry at the Mexican border and the opening of additional ports of entry is pending. The Bureau of Customs recently inaugurated in Nassau, Bahama Islands, a practice of inspecting aircraft and baggage prior to departure for the United States. It was necessary also to establish pre-flight plant quarantine clearance there since agricultural quarantine clearance is required simultaneously with Customs clearance.

The tourist traffic is expected to hit new peaks. The Bureau of Customs has advised that it will not be possible to maintain its present level of baggage inspection for agricultural quarantine purposes in fiscal year 1961 unless additional inspectors can be provided.

Plan of Work. On the basis of present and foreseeable workload and traffic trends, it is proposed to station additional quarantine inspectors at the following ports: Nogales, Arizona; Calexico and San Ysidro, California; Dover, Delaware; Jacksonville, Miami, Patrick Air Force Base, Tampa and West Palm Beach, Florida; Honolulu, Hawaii; Chicago, Illinois; New Orleans, Louisiana; Detroit, Michigan; Duluth, Minnesota; New York, N.Y.; Wilmington, North Carolina; Cleveland, Ohio; Philadelphia, Pennsylvania; Brownsville, El Paso, Cordova Island (El Paso), Hidalgo, and San Antonio, Texas; Seattle, Washington; Milwaukee, Wisconsin; San Juan, Puerto Rico; and to initiate inspection services at a new port of entry currently expected to be opened at Anzalduas Dam, Texas.

The following measures would also be taken to supplement the plant quarantine protection that can be provided by port-of-entry inspection:

- (1) Additional steps to acquaint the public with agricultural quarantine restrictions. The progress that has been made in this field has been encouraging and added emphasis will be placed on using all available outlets to get this subject before the public.
- (2) Close cooperative relationships will be maintained between the Bureau of Customs, Immigration and Naturalization Service, U.S. Public Health Service, and the animal and plant inspection and quarantine services of the Agricultural Research Service in coordinating inspection to achieve maximum coverage at ports of entry.
- (3) Close working relationships will be maintained with Canadian officials on mutual problems, particularly those resulting from the opening of the St. Lawrence Seaway.
- (4) Opportunities will be taken to work with quarantine officials of other countries, especially those of Mexico and Central America, for mutual protection against the establishment of foreign pests on the North American continent.

The increase would provide for the employment of approximately 48 plant quarantine inspectors at the twenty-six ports listed above, and for reimbursement to the Bureau of Customs of approximately \$80,000 for providing additional baggage inspection for agricultural quarantine purposes.

(c) Increase of \$201,400 under the project "Animal Inspection and Quarantine" for that portion of the cost of staffing and operating the National Animal Disease Laboratory, Ames, Iowa, in 1961 which is applicable to the animal inspection and quarantine services.

Note: The justification for the increase is included under item (1) (c) above.

(d) Decrease of \$2,100,000 under the project "Animal disease control and eradication" consisting of:

1. Decrease of \$1,250,000 in the brucellosis eradication program.

In fiscal year 1955 an accelerated program was undertaken under Section 204(e), Title II of the Act of August 28, 1954, which authorized annual transfers of additional funds from Commodity Credit Corporation to finance such a program. Under this accelerated program, the Federal portion of which is now financed entirely under this appropriation, rapid strides have been made. In view of this progress, in fiscal year 1960 Federal support of the program was decreased by \$3,750,000. A further reduction of \$1,250,000 is proposed for fiscal year 1961. The proposed Federal funds available for this program in 1961 would be \$15,477,000.

The progress in achieving modified-certified brucellosis status and the funds obligated in recent years for the program are shown in the following tabulation:

<u>Fiscal Year</u>	States and Territories Certified <u>Annually</u>	Counties Certified <u>Annually</u>	<u>Obligations</u>	
			<u>Federal</u>	<u>State</u>
			(in thousands)	
Prior to 1954	3	312	- -	- -
1954	-	22	\$3,677	\$12,204
1955	-	45	15,333	11,234
1956	2	121	20,186	15,730
1957	2	235	21,000	15,842
1958	9	482	22,252	16,706
1959	5	436	20,163	17,065
1960 (est.)	6	304	16,637	14,958

As of November 30, 1959, a total of 1,772 counties in 48 States had attained modified-certified brucellosis area status; in 23 of these States and Puerto Rico and the Virgin Islands all of the counties had achieved such status. The certified counties represent more than half of the counties in the United States and Territories, and the total compares with three complete States and 334 counties in 17 States similarly designated at the end of fiscal year 1954. To achieve this certification status, cattle and herd infection rates must be reduced to not more than one percent and five percent respectively within the county.

2. Decrease of \$850,000 in the screwworm eradication program.

Based on the exceptional progress of the screwworm eradication program and anticipating that no screwworm flies will be found in Florida, Alabama and Georgia during fiscal year 1960, a decrease is proposed for this program in the amount of \$850,000.

The Second Supplemental Appropriation Act of 1958 provided \$1,600,000 for initiating the Federal-State cooperative program to eradicate screwworms in the Southeastern States and to prevent the interstate

movement of infested livestock into the areas freed of screwworms. In fiscal year 1959 these funds were increased by \$900,000, making a total of \$2,500,000 available for the program. In fiscal years 1959 and 1960, an eradication program has been underway which includes the production and dispersal of approximately 50 million sterile screwworm flies per week in Florida and parts of Georgia and Alabama.

After fiscal year 1960, it will be necessary to continue field inspections to insure prompt detection of incipient outbreaks which may occur throughout the Southeastern States. It will also be necessary to strengthen inspection along the borders of the area from which the screwworm has been eradicated to prevent reintroduction from the heavily infested areas that are located west of the current eradication area.

Because progress in the program in fiscal year 1960 has been more rapid than anticipated, \$250,000 was transferred to the "Plant pest control" project to permit the Department to initiate work authorized by an amendment to the Federal Insecticide, Fungicide, and Rodenticide Act, approved on August 7, 1959. With the proposed reduction of \$850,000, a balance of \$1,400,000 will remain available in 1961 for field inspections and for maintaining constant vigilance at animal inspection stations along the eastern border of Louisiana and Arkansas and at other points to inspect, and treat when necessary, susceptible animals moving from screwworm-infested areas into the screwworm-free area of the Southeast. It must be possible to take immediate measures to identify and eliminate, through production and release of sterile flies, any incipient infestations or isolated outbreaks which may occur in the screwworm-free area. Facilities for sterile fly production and release must be maintained to provide for resumption of eradication activities should incipient outbreaks occur.

(e) Decrease of \$38,300 due to the anticipated provision in the direct appropriation to General Services Administration for certain leasing costs now paid from this appropriation.

Note: It is proposed that the decrease would be distributed by projects as follows:

Plant pest control	-\$16,200
Plant Quarantine	-4,800
Animal disease control and eradication	-17,300
Total	<u>-38,300</u>

The justification for this decrease is included under item (1) (b).

Special Fund

(3) Decrease of \$1,000,000 due to elimination of the Special Fund provided in the 1960 appropriation.

The Special Fund was provided through the reappropriation of not to exceed \$1,000,000 of the unobligated balances from the 1959 appropriation for Salaries and expenses, ARS, which is available for additional labor by contracts, cooperative agreements, and direct employment to strengthen the work at research installations in the field. The 1961 Budget proposes the elimination of this special authority provided for the fiscal year 1960.

In fiscal year 1960, the distribution of the Special Fund by projects is estimated as follows:

Farm Research:	
Animal husbandry	\$172,000
Animal disease and parasite	64,500
Crops	295,700
Entomology	177,400
Soil and water conservation	177,400
Farm economics	21,500
Agricultural engineering	67,800
Total, Farm Research	<u>976,300</u>
Utilization research and development:	
Western Utilization	<u>4,300</u>
Home economics research:	
Human nutrition	5,400
Clothing and housing	3,200
Total, Home Economics Research	<u>8,600</u>
Administration of Payments to States, and research in Alaska, Puerto Rico, and Virgin Islands:	
Research in Alaska, Puerto Rico, and Virgin Islands	<u>10,800</u>
Total	<u>1,000,000</u>

Federal Employee Health Benefit Costs

(4) An increase of \$1,041,600 is required to meet employee health benefit costs under Public Law 86-382, applicable to the base for 1961. A full explanation of the health benefit cost estimates appears in the "Preface" at the beginning of the Explanatory Notes. The increase is distributed by subappropriation as follows:

Research	\$497,200
Plant and Animal Disease and Pest Control	306,600
Meat Inspection	<u>237,800</u>
Total	<u>1,041,600</u>

CHANGES IN LANGUAGE

The estimates include proposed changes in the language of this item as follows (new language underscored; deleted matter enclosed in brackets):

- For expenses necessary to perform agricultural research relating to production, utilization, and home economics, to control and eradicate pests and plant and animal diseases, and to perform related inspection, quarantine and regulatory work, and meat inspection: Provided, That not to exceed \$75,000 of the appropriations hereunder shall be available for employment pursuant to the second sentence of section 706(a) of the Organic Act of 1944 (5 U.S.C. 574), as amended by section 15 of the Act of August 2, 1946 (5 U.S.C. 55a): Provided further, That appropriations hereunder shall be available for the operation and
- 1 maintenance of aircraft and the purchase of not to exceed two, of
which one shall be for replacement only: Provided further, That appropriations hereunder shall be available pursuant to title 5, United States Code, section 565a, for the construction, alteration, and repair of buildings and improvements, but unless otherwise provided, the cost of constructing any one building (except headhouses
 - 2 connecting greenhouses) shall not exceed [~~\$10,000~~] \$17,500, except
 - 2 for five buildings to be constructed or improved at a cost not to
 - 2 exceed [~~\$20,000~~] \$35,000 each, and the cost of altering any one
 - 2 building during the fiscal year shall not exceed [~~\$3,750~~] \$7,500
 - 2 or [4] 6 per centum of the cost of the building, whichever is greater:

- Research: For research and demonstrations on the production and utilization of agricultural products, home economics, and related research and services, including administration of payments to State agricultural experiment stations; [~~\$67,722,490~~] \$68,981,700: Provided,
- 3 That the [Secretary is authorized to acquire from the Department of the Army without reimbursement land and improvements at Orlando, Florida, to be transferred pursuant to the Federal Property and Administrative Services Act of 1949, as amended: Provided further, That the] limita-
 - 4 tions contained herein shall not apply to [(a)] replacement of buildings
 - 4 needed to carry out the Act of April 24, 1948 (21 U.S.C. 113a) [, or (b)]
 - not to exceed \$2,939,000 for the construction and alteration of buildings: Provided further, That the Secretary is authorized to acquire by donation lands necessary for the construction thereof];
- 5 [Special fund: To provide for additional labor to be employed under contracts and cooperative agreements to strengthen the work at research installations in the field, not more than \$1,000,000 of the amount appropriated under this head for the fiscal year 1959 may be used by the Administrator of the Agricultural Research Service in departmental research programs in the fiscal year 1960, the amount so used to be transferred to and merged with the appropriation otherwise available under "Salaries and expenses, Research".]

The first change provides that one of the two planes proposed for purchase in 1961 would be for replacement, and one would be an addition. Both planes are required for plant pest control activities and would be four-place observation

planes designed specifically for agricultural work. They would cost approximately \$17,000 each. The additional plane is needed to reduce dependence on rented aircraft which have been unsatisfactory for the work, because of not being adapted to the needs of the Service nor always available when needed. It is expected that the other plane would replace a 1957 Cessna (four-passenger) because of its excessive operating and repair costs.

The second change consists of three parts, as follows: (a) proposes an increase in the limitation on the maximum cost of constructing any one building from \$10,000 to \$17,500. For several years building costs have risen about 5 percent each year. According to reports in "Engineering News Record" the change from July 1958 to July 1959 alone has been 5.8 percent. Under present conditions very few building needs can be met under the limitation. Its principal use has been for small prefabricated metal buildings, which have limited acceptability for research purposes. To eliminate high repair or maintenance costs, systematic replacement of old buildings should be instituted. These consist mainly of shops, buildings for storage and protection of property, for cleaning, handling, and storage of seed or valuable crops and research products, etc.

(b) proposes an increase in the limitation on the construction of five buildings from \$20,000 to \$35,000 each. This limitation is used to construct or improve small buildings urgently needed for storage and handling of crops, seed, and other research materials, machine shops, equipment storage, and laboratory and other purposes.

In several cases when estimates of costs were made, it has been necessary to revise plans considerably to remain within the limitations. This has resulted in providing less space than really needed for best use, in one case by about one-half, or inability to provide for use of the newer research techniques, such as radioactive tracer techniques, etc., which require more costly construction.

The increase in this limitation also would provide for emergency replacement, in case of losses from fires, windstorms, or other hazards, of small buildings which cannot be replaced within the present limitation.

(c) proposes an increase in the limitation on alteration costs from (a) \$3,750 to \$7,500 for any one building or (b) from 4 to 6 per centum of construction costs of the building, whichever is greater. The present limitations unduly restrict alterations needed to make best use of existing space for research and other work, or alterations needed to employ new methods in current research work. Alterations needed usually consist of moving partitions and making existing space available for other purposes, major changes in utilities, small additions, installation of constant temperature facilities, safety measures needed for use of radioactive tracer techniques, etc. Since most buildings were constructed many years ago when building costs were low compared with present costs, the percentage limitation applied to original cost is unduly restrictive.

The third change deletes the authority contained in the 1960 Act, to acquire land and improvements at Orlando, Florida, used for an entomology research laboratory. The authority is not necessary in fiscal year 1961.

The fourth change deletes the limitation contained in the 1960 Act on construction and alteration of buildings and authority to acquire land by donation therefor. It provided for the construction of research facilities at Logan, Utah; State College, Miss.; Tifton, Georgia; and Brookings, S. Dak. As discussed previously in these justifications, the contracts for these buildings are expected to be awarded in 1960. Therefore, this language will not be needed in 1961.

The fifth change deletes the language of the Special Fund item, a specific provision made in the 1960 Act, which provided for the use of not more than \$1 million of unobligated balances from the 1959 appropriation for additional labor to strengthen the work at research installations in the field. As discussed previously in these justifications, no such provision is proposed for 1961.

STATUS OF PROGRAM

The Agricultural Research Service carries out the Department's scientific research in the fields of livestock, crops, soil and water conservation, farm economics, agricultural engineering, utilization research and development, and home economics. It conducts both fundamental and applied research in these fields, utilizing physical, biological and economic sciences.

Research is conducted at the 12,000-acre Agricultural Research Center, Beltsville, Maryland, and at numerous locations in the States, Puerto Rico and Virgin Islands, and in foreign countries. A large part of the research is in cooperation with State agricultural experiment stations and other public and private agencies. Research is also conducted under contract with various public and private agencies and institutions.

Programs for control and eradication of plant and animal diseases and pests are conducted to prevent introduction into the United States of pests and diseases of foreign origin, to prevent the spread interstate of those within the country, and to control and eradicate them where found. These programs are conducted at numerous locations in all States, Puerto Rico and Virgin Islands, on farms and ranches, at sea, air, and border ports of entry, in public stockyards and establishments licensed under the Virus-Serum-Toxin Act, etc.

Work of the Service also includes enforcement of the Federal meat inspection laws to assure production of disease-free, clean, and wholesome meat and meat products for both civilian and military use and for foreign commerce. This is accomplished by supervising slaughtering and meat processing operations at meat packing plants, application of controls over imported meats to assure the same protection as in the case of meats produced domestically, and supervision of a system of certifying meats for export to keep foreign markets open to American meats.

As a part of its regular programs, the Agricultural Research Service conducts research and prepares plans for preventing or combating foreign plant and animal diseases which might be intentionally introduced into the United States. Research is also conducted on protective measures for decontamination and utilization of crops, animals, or soils affected by direct radiation or radio-active fallout.

FARM RESEARCH

Current activities: Investigations are conducted on production methods and improvement of field and horticultural crops and of farm livestock, poultry, and domestic fur animals, including means of control of plant and animal pests and diseases. Soil and water conservation research is conducted to develop new and improved soil and crop management practices, improve irrigation and drainage methods, develop information on watershed hydrology, improve fertilizers and liming materials, and determine the relations of soils to plant and animal nutrition. Farm economics studies are

made to find profitable adjustments in farming by type and size of farm and their relation to costs, returns, and total farm output of different products. Farm economic research also covers investigations of efficiency in use of labor, equipment, land, water, and new and improved farming techniques, inventory and analysis of land resources, and problems of land valuation, taxation, debt, tenure, and risk. Engineering studies are made to improve the mechanization of crop and livestock production and the harvesting and processing of farm crops, to develop better types of farm structures and new uses for electricity on farms, and to adapt electrical equipment to farm use.

In recent years farm research has been continuously reviewed to emphasize work which would meet problems of agricultural surpluses, as well as market demands. This has included breeding and development of the meat-type hog to reduce fats in surplus, production of milk with high solids and lowered fat content, corn with waxy starch for glues and adhesives, corn with high amylose content for industrial use, etc. The program for introduction and development of new crops has also been expanded and basic research essential to agricultural needs has been steadily increased.

Selected Examples of Recent Progress

Animal Husbandry Research

1. Dairy cattle breed associations adopt DHIR production testing plan. During 1959, plans were completed and approved for the establishment of a dairy herd improvement registry (DHIR) production record which is essentially an electronically computed DHIA record to be used by all the various dairy cattle breed registry organizations. This development will rapidly lead to a single production record being used by all agencies interested in the improvement of the nation's dairy cows and represents a tremendous step forward in the development of a completely uniform program across the nation.
2. Genetics of feed utilization measured. Exploratory research is under way at Beltsville, Md., to determine the value of certain feeding regimes in estimating genetic differences in feed efficiency. The individual differences between dairy cows are being compared for three different groups - group A all being fed at the same level regardless of production, group B fed to minimize differences in body weight changes, and group C fed in accordance with the accepted feeding standards. Preliminary results show that it is practically impossible to minimize body weight changes and group B is being eliminated from the comparison. The average efficiencies of groups A and C were practically the same on the 9 cows which have completed one lactation. However, the variation in efficiency among the cows was nearly twice as great in group A fed at the same level as in group C fed according to accepted standards, thus suggesting that

the method brings out genetic differences.

3. Body temperature variation found related to reproductive activity. Defects in ovarian activity are important factors in infertility of dairy cattle. While the gross evidences of these defects are easy to detect, minor but still important variations are difficult to detect. Body temperature variations have been shown to be related to ovarian activity in human subjects and the present work was done to determine whether body temperature measurements would be an indicator of ovarian activity in dairy cattle. It was found that the body temperature of dairy cows fluctuates with the estrus cycle, being lowest on the day before heat, high on the day of heat, and low again at the time of ovulation and rather steadily high during the luteal phase of the heat cycle. A marked drop in body temperature in pregnant cows immediately preceding calving was noted. Other experiments have shown that progesterone (the hormone secreted by the corpus luteum in the ovary) maintains the body temperature of cows at a high level. This observation suggests that the fluctuations in temperature noted during the heat cycle or during pregnancy may, therefore, be an indication of varying corpus luteum function. Measurement of body temperature may be a useful means not only of determining the presence or absence of ovulation but also a means of detecting variations in corpus luteum activity.
4. Important economic traits of beef cattle appear highly heritable. The genetic correlations between growth rates in different periods of an animal's life, together with observations indicating that calves adequately fed tend to grow at a rather constant rate up to 12 to 15 months of age, suggest that tests of ability to gain may be carried out at younger ages than has been usual. Heritability estimates of mothering ability, as measured by weaning weights of calves, ranged from 30 to 80 percent accurate thus reinforcing previous estimates that selection for this important trait should be effective.
5. Reproductive performance of beef heifers affected by energy and protein levels of diet. An experiment to determine the effect of nutritional level on the reproductive efficiency of beef cattle was started in November 1956 with Angus heifers. The levels of feed intake were (a) fullfed for maximum gain, (b) fed for daily gains of about 0.8 pound, and (c) fed merely to maintain weight. Three levels of protein intake were fed within each energy group. At present the calving percentage in the full-fed groups is about 50 percent, in middle groups about 90 percent, and in the low groups about 40 percent. The death losses of calves at birth in the high energy groups have been excessive. It has been necessary to raise the feed level of the low groups in order for them to exhibit heat. The medium energy adequate protein levels have given optimum

reproductive performance.

6. Microbiology studies throw light on bloat problem. Slime production by ruminal bacteria has been advanced as a possible factor in the bloat of cattle and other ruminants. The food fermentation gases are entrapped in the slime and block the normal gas eructation mechanism in the animal. Recent studies with cases of feed-lot bloat have shown that an increase in slime-producing organisms occurred with the onset of the bloat symptoms. Legume saponins have been implicated in bloat when animals graze on clover and alfalfa. Ruminal bacteria capable of utilizing a part of the saponin molecule, with resulting production of a slimy residue, have been isolated from bloated steers on clover pastures. More research is necessary before the role legume saponins play in bloat is fully understood. The ruminal microbial population appears to be intimately associated with both feed-lot bloat and legume pasture bloat.
7. Studies of inheritance of tenderness in beef intensified. Following determination that tenderness in beef is heritable, research was undertaken to develop a reliable and accurate method for determining tenderness in live animals. A number of chemical and physical measurements are being studied with a view to eventual application of them to the live animal in the taking of small biopsy samples. The collagen and elastin content of beef muscle has been regarded by many as the most important factor responsible for its tenderness. Studies of these connective tissue fractions have been conducted, using the hydroxyproline content as the fraction to determine. Contrary to previous assumptions the study disclosed that variations existed in the hydroxyproline of the collagen fraction. However, the hydroxyproline of the elastin fraction was less variable. There are indications that the determination of hydroxyproline could be used to supplement other methods now used in evaluation of meat quality, particularly tenderness.

Progress has been made in an effort to find an objective and reliable method of determining tenderness in raw meat samples. The principle studied was that of pressure, in which pounds pressure required to exude juice from the sample was regarded as representing tenderness or toughness of the sample. An analysis of the data showed that the relationship between taste panel evaluation of tenderness and that of the press (raw) was high, the correlation coefficient being +0.899. Further refinement is now being made to the pressure chamber in order that small pea-sized biopsy muscle samples can be obtained and tested.

8. Objective methods studied to evaluate livestock in relation to composition studied. Recent attention in research in cooperation with the Agricultural Marketing Service has

been given to the possible application of ultrasonics as a rapid and reliable measure of a meat animal's composition. Ultrasonic waves travel at different rates through fat, lean and bone, and the point at which these rates change can be measured on an oscilloscope. An ultrasonic Echoscope having a range of 0.4 mc to 10.0 mc has been obtained for testing purposes. Preliminary results indicate that the thickness of back-fat in hogs can be determined with a relatively high degree of accuracy.

Previous studies have shown that area of eye muscle at the last rib is highly heritable. Therefore, attention is being directed not only to obtaining information on thickness of back fat but thickness of eye muscle. The proper location to obtain the most accurate measurements and the sonic frequency to use are now being studied. Similar studies are being made on cattle and lambs.

9. Better understanding of heritability of economic characters in swine achieved. A study has been made of heritability estimates of economic characteristics in swine based on research by the Regional Swine Breeding Laboratory in cooperation with various State Experiment Stations and the Department at Beltsville, Md., and Miles City, Montana. For the important economic traits indicated to be rather highly heritable - length of carcass, yield of fat cuts, and backfat thickness - the most probable improvement expected within a single generation from selection was found to be about 61, 60 and 46 percent, respectively. For traits found to be intermediate in heritability - litter size or pig weight at weaning - the expected improvement per generation would be considerably slower or only about 15 and 5 percent, respectively. Experience, as well as theoretical studies, have shown that the latter type traits can most readily be improved by developing inbred lines and combining them into superior hybrids while fatness traits such as measured by backfat thickness are most responsive to mass selection as conventionally practiced by commercial producers.
10. Pelleted roughages for sheep increase efficiency of feed use. Comparisons of pelleted alfalfa hay with chopped hay have shown that sheep fed pelleted hay had heavier body weights and produced heavier fleeces than sheep fed the chopped hay. In both cases the total feed consumed was similar. Pelleting did not significantly increase gross energy or digestibility as a whole. An apparent increase in the digestibility of the fat fraction seemed to be due to errors inherent in this method. The comparisons indicate that the coarse, stemmy portions of roughage, that are normally refused by sheep, are of low nutritive quality and little can be gained from forcing sheep to consume this material. However, pelleting does reduce the wastage of leaves and fine stems which have higher nutritive quality and significantly reduces feed refusal.

11. New procedure developed for measuring fiber length of wool. Wool tops are often downgraded because of variability in fiber length. It is important to determine the source of this variability. In the past it has been necessary to use laborious methods for measuring fiber length of grease wool. To avoid this, a sampling procedure has been developed. It has been found that the fiber length of a fleece of wool can be satisfactorily determined by measuring only one to three fibers each from each of 25 to 50 locks of wool. This method will greatly facilitate studies on the sources of variability in fiber length of wool top.
12. Antioxidant with fish waste prevents yellow fat disease in mink. In tests at Petersburg, Alaska, the antioxidant, butylated-hydroxy-toluene (BHT), was included in mink diets comparing salmon waste from three different species of salmon. No significant effects on reproduction were obtained, but yellow fat disease was prevented in all groups receiving the BHT in contrast to an incidence of 92 percent on pink salmon waste and 62 percent on red salmon waste when fed without the antioxidant. The disease did not occur in animals fed chum salmon waste.
13. Fertility and hatchability in turkeys improved. Greatly extended breeding seasons in turkeys have resulted from recent lighting studies at Beltsville. It has long been a commercial practice to bring turkeys into fertile egg production by lighting both hens and toms in mid-to-late winter to provide a constant 12 to 14 hour day. Normally such a breeding season was of short duration, ending in early or mid summer. Late summer and fall poults are usually scarce and expensive, thus making year-round turkey production uneconomic. In the recent experiment the length of the light day was gradually increased from 12 hours to 15 hours over an 18-week period. Effective breeding seasons of about 24 weeks resulted in contrast to the usual maximum of 16 weeks or less. By extending the breeding season into the late summer and fall, poult costs can be materially reduced.
14. Combining high egg production with high egg quality. Breeding studies at Beltsville are showing progress in combining high quality with high egg production. Past studies have indicated that egg number and size were negatively correlated genetically with good interior quality and good shell quality. Such findings have discouraged breeders from improving the market quality of their product. Studies are demonstrating that the possible antagonism between desirable traits can be overcome to a large degree. The Beltsville studies indicate that in only 4 generations, egg production has been increased from an average rate of about 220 eggs per year to about 253, and egg weight has increased from 54.2 grams to 55.4. During this period the very high albumen quality and shell quality already present in the strain have not been lowered, and advancing age in the Beltsville strains has caused little lowering of albumen

quality as found with most strains.

15. Egg laying in the hen controlled by the brain. A specific part of the hypothalamus of the chicken brain has been shown to control release of the hormone or hormones responsible for ovulation. The same center appears to exert some influence on maturing ovarian follicles as well as on the timing of egg-laying. Ovulations artificially induced by progesterone likewise require the same center to be functional. These results have been obtained by making discrete electrolytic lesions in specific parts of the brain. The duration of activity of this center was found to be about 2 hours, terminating 5 to 6 hours before actual ovulation. Previous work at Beltsville has established the role of hormones in ovulation and the timing sequence has been worked out. The additional knowledge gained of the brain's role in the series of events leading up to the production of an egg seems to have provided a complete picture of the processes involved. Improvement in efficiency of egg production through breeding and control of environmental factors such as light can be approached more directly and effectively as a result of these studies.

Animal Disease and Parasite Research

16. Viruses of foreign diseases studied. Study has been made of the persistence of foot-and-mouth disease virus in carcasses and meat from infected animals handled in accordance with standard meat processing procedures. Samples of meat have been found to contain infective virus in lymph glands stored as long as 50 days and in bone marrow as long as 60 days. As a result of these findings, import regulations with respect to cured meats have been tightened for further protection of the livestock industry.

Methods have been developed for propagation of African swine fever virus in tissue culture, enabling determination of the concentration of virus. These methods previously have been unsuccessful for propagation of hog cholera virus. Since African swine fever is clinically indistinguishable from hog cholera, this phenomenon may prove useful in differentiating the two diseases.

17. Gains made in research on shipping fever of cattle. A hemagglutinating virus has been isolated from cases of this disease and classified as para-influenza III. It produces clinical symptoms of short duration and may be only one of multiple agents in the shipping fever complex. Sufficient time has not elapsed to determine the prevalence of the infection in this country, but it is believed to be a breakthrough on better understanding of the disease complex.
18. Vaccine found for prevention of infectious bovine rhinotracheitis. The virus causing this disease, a disease which is widespread in a number of States, has been isolated. It has

been determined that so called red nose, upper respiratory disease of cattle, or an undiagnosed influenza-like disease of cattle are the same disease as bovine rhinotracheitis. The preventive vaccine developed has proved very satisfactory.

19. Amount of radioactive material in milk influenced by non-radioactive calcium in diet of cattle and goats. The amount of radioactive materials in the form of strontium 89 that must be ingested by cattle and goats on forage to cause such materials to appear in the milk is influenced by the non-radioactive calcium in the diet. The lactating cow on a normal calcium diet put 0.08 percent of the daily ingested strontium 89 into each quart of milk and the goat 1.4 percent. On a low calcium diet there was an increase of strontium 89 appearing in the milk and on a higher calcium diet there was a decrease.
20. Low level doses of ET-57 and Dowco 109 given internally appear to control cattle grubs. Thirty-four animals treated (July and August 1958) with ET-57 at the rate of 5 mg./kg. per day (milligrams per kilogram of weight per day) for 14 days and Dowco 109 at the rate of 3 mg./kg. per day for 14 days were examined for cattle grubs in January, February, and March 1959. A total of 13 grubs was extracted from the principals (all from the animals treated with ET-57) while a total of 897 grubs was extracted from 38 control animals; all of which were infested. No grubs were found in the animals treated with Dowco 109. This finding is significant because it points the way toward reducing amounts of pesticides used for control, thus reducing residue hazards.
21. Storage of hay before feeding provides control of beef tapeworm. Hay contaminated with eggs and ripe segments of the beef tapeworm (*Taenia saginata*) was found to be almost completely safe for feeding to cattle after it was stored in a barn for a little more than 3 weeks. The beef tapeworm, which is transmissible to man, is of importance in the North Central States and in the South and Southwest. Numerous outbreaks have occurred recently.
22. Ability of intestinal threadworm to penetrate unbroken skin of lambs demonstrated. Infective larvae of this worm of domestic ruminants (*Strongyloides papillosus*) penetrated the skin of lambs within a few minutes. However, some larvae remained on the skin for as long as 48 hours. This intestinal threadworm is widespread and of special importance in feedlot lambs in warm moist areas. It causes diarrhea and general debility.
23. Management of swine studied to minimize losses from large roundworms. This worm causes considerable damage to young hogs. Cooperative work with the University of Nebraska shows that the number of large roundworms establishing themselves in pigs is influenced by the diet fed experimentally infected animals.

24. Development of method for early diagnosis of swine kidney worms indicated. Swine experimentally infected with kidney worms have been shown to produce anti bodies which may be detected in the serum as early as the fourth week after infection. Agar precipitation tests have indicated that at least six anti bodies are present from the fourth to the thirteenth week after infection. These findings appear to be a breakthrough in early diagnosis of kidney worms which are a problem in the South. While there may be no visible effects in swine infected with these worms, they result in considerable losses to farmers through condemnation of the more expensive cuts of meat.
25. Chemicals tested for control of swine helminths. Several agricultural chemicals have been found to be lethal to the free-living stages of swine helminths in soil in low concentrations under laboratory conditions. Eggs and larvae of the nodular worm and the red stomach worm were all killed by calcium borate, phenothiazine, dieldrin, pentachlorophenol, borax, calcium hydroxide, and urea at the concentrations of 1 to 500 parts by weight or less.
26. Inactivated virus vaccine for Newcastle disease developed. A vaccine which compares favorably in immunity conferred with modified live virus vaccines has been developed following exhaustive studies over a period of 10 years. Each of five factors shown to influence the potency of the vaccine was investigated. The factors studied were antigenicity of the virus strains, amount of virus used in the vaccine dose, the inactivating agent or method of virus inactivation, the vaccine preservative material, and the role of adjuvants in immunogenicity. If the killed vaccines are applied to field control the results of this research should minimize field outbreaks by eliminating virus dissemination through live virus vaccines and pave the way for eventual eradication of the disease.
27. Effective fowl cholera vaccine developed. Studies at Beltsville show that formalin or ethylene oxide-killed Pasteurella multocida incorporated in an excipient is a safe and highly effective vaccine for the prevention of fowl cholera. The protection afforded persists for at least one year.
28. Cultivation of soil of poultry ranges aids control of blackhead. Blackhead is difficult to control because the parasites are carried from bird to bird by eggs of the cecal worm, another parasite of poultry. Research shows that a single plowing of blackhead-contaminated ranges reduced blackhead in birds kept thereon by about 80 percent.
29. Progress made in research on chronic respiratory disease in poultry. Cooperative research with 11 State experiment stations has resulted in development of a rapid, whole blood

plate antigen and a tube antigen for diagnosis of air sac infection in chickens and infectious sinusitis in turkeys. As a result, several States have initiated field trials for the elimination of infectious sinusitis in breeder flocks supplying selected hatcheries.

Cultural and animal inoculation procedures have been developed to the point that pathogenic and nonpathogenic strains of pleuropneumonia-like organisms, the causative agent of chronic respiratory disease in chickens and infectious sinusitis in turkeys, can be differentiated. At least five nonpathogenic strains of different serotypes and one pathogenic strain have been differentiated.

The use of various antibiotics, when given at 200-300 grams per ton of feed in the treatment and prevention of air sac infection in poultry, has not been entirely successful.

30. Simplified diagnostic test developed for ornithosis in poultry. In cooperative research with 5 State experiment stations, a simplified direct-complement-fixation test has been developed and standardized for the diagnosis of ornithosis in turkeys. By the use of this procedure broad surveys have revealed a high incidence of ornithosis infection in turkey flocks in States surveyed. Wild birds surveyed have shown that water fowl, such as gulls, are carriers of the ornithosis agent. Sparrows have also been found to be infected.

A group antigen, which is nonpathogenic for humans, has been developed for the diagnosis of ornithosis in turkeys and is in the process of standardization in the cooperating laboratories. This antigen is derived from a member of the lympho granuloma venerum group.

Proper treatment of infected turkey flocks with the antibiotic aureomycin, results in the dissipation of the infection from the flock.

Crops Research

31. Isolation of pigment that controls response of plants to light. A significant step toward a more complete and basic understanding of the physiology of plant growth and development has been made in isolating and partially purifying the pigment responsible for controlling plant response to light. Previously, the only way of studying the red and far-red photoreaction in plants was through biological means, such as flowering, stem elongation, or seed germination. Now it will be possible to study the photoreversible pigment by instrumentation which greatly facilitates further research in this field. This finding is believed to be the most important discovery in plant physiology since the role of auxin was discovered in the early thirties.

32. Advance made in basic investigations of plant reaction to systemic insecticides. The discovery that systemic insecticides are not retranslocated in the cotton plant has provided new impetus and objectives to the basic research on development of longer lasting systemic insecticides. It was previously considered that failure to obtain late-season control of insects with such treated plants was due to a dilution effect. However, recent basic studies show that the cotton plant may efficiently absorb systemic insecticides throughout its growth period but the chemical is stored in the tissues present at time of absorption and is not retranslocated to new tissues. Researchers now realize that efficient, full-season insect control with such chemicals can be accomplished either through improvement of methods for providing a continuous supply of the chemical throughout the growth period, or by development of effective systemic chemicals which can be retranslocated from points of storage to newer tissues as the plant continues to grow. Consequently, there now appears to be an effective approach to the control of late season insects through the proper application of systemic insecticides.

33. New crop varieties recently released include:

Cody, a new alfalfa variety, resistant to the spotted alfalfa aphid, has been released by the Department and the Kansas Experiment Station. It was developed by screening more than a quarter of a million plants of the variety Buffalo for resistance to the aphid, and progeny testing the selected plants. Preliminary results indicate that Cody will be adapted to the Central Plains region and east.

Six new superior soybean varieties for the North Central and Southern States have been developed to reduce hazards of production of soybeans. Three of the varieties - Hill, Hood and Scott - are resistant to serious leaf diseases that normally reduce soybean yields in Mississippi, southern Missouri, North Carolina, Virginia, and Delaware. Lindarin, a new variety for northern Indiana and Illinois, produces seed of better quality than present varieties and has more resistance to downy mildew, Phytophthora root-rot and stem-canker diseases. Ford is a new, high-yielding variety for central Iowa, southern South Dakota, and northern Nebraska. Shelby is superior to present varieties in areas of central Indiana, Illinois and northern Missouri.

Gila is a new high-yielding, safflower variety, resistant to root-rot, developed by the Department and the Arizona Experiment Station. Extensive tests indicate that it yields 15 to 25 percent more than N10, the best commercial variety; has a satisfactory oil content (35 to 38 percent) and acceptable bushel weight (45 pounds). Being resistant to Phytophthora root-rot, it is the first variety suitable for growing on irrigated lands. Gila was planted on 600 acres in 1959 and all of the seed produced has been reserved for planting in

1960. The acreage planted to safflower in the United States increased from 100,000 acres in 1957 to approximately 250,000 acres in 1959.

Blanco, a new lupine for the lower South is a white-seeded white-flowered, sweet blue lupine developed in cooperation with the Georgia Experiment Station. It appears to be the answer for farmers of the lower Southeast who want a sweet blue lupine for winter grazing, soil improvement and for seed production; one that is distinguishable from the bitter blue varieties. Blanco is distinguishable from other blue lupines by flower color, seed color and by the absence of purple coloring in the stems, petioles and leaves.

A rapid growing, high yielding sansevieria hybrid has produced remarkable yields on the organic soils at Belle Glade, Florida and greatly enhances the prospects for sansevieria as a commercial crop in Florida. With its rapid growth and annual harvest, the leaves do not need to be subjected to the winter cold.

Four improved varieties of lettuce for Pacific Coast States, developed by the Department in cooperation with the California Experiment Station, are Golden State C, Golden State D, Climax, and Vanguard. They all embody improvements in tipburn resistance, eating quality, and market qualities over varieties currently grown in several districts in the Pacific Coast States. The variety Vanguard is of special interest because it was developed after almost 30 years from a hybrid between cultivated lettuce (*Lactuca sativa*) and a wild lettuce (*Lactuca virosa*). It derived an unusually high resistance to tipburn and other distinctive qualities from the wild parent.

Valverde, a new mildew-resistant lettuce for the South is highly resistant to downy mildew, a major limiting factor in winter lettuce culture in the Lower Rio Grande Valley. It was developed by the Department and the Texas Experiment Station. It is attractive, productive, and has good eating quality, good market properties, and produces good crops under conditions of mildew infection that may make other varieties completely worthless for market.

Two new tomato varieties, Pearson VF-6 and VF-11, introduced by the Department and the California Experiment Station in late 1958 for use in the West, are verticillium and fusarium-resistant.

Navajo, a new potato introduced for the Rocky Mountain area, is a smooth, white-skinned oval-to-round variety developed by the Department and the Colorado Experiment Station. It is resistant to scab and early blight, is high-yielding, and of high quality. It is satisfactory for making chips and stores well. Navajo produces a higher percentage of U. S. No. 1 potatoes and of total solids than does Katahdin, under Colorado conditions.

Two new pecan varieties, Choctaw and Wichita, are the result of many years of breeding in which superior nut quality, size and productiveness have been combined into single varieties. Much of the pecan production in the United States is still from native trees. These superior varieties should do much to increase farm value as well as market value.

34. Ozone studied as a cause of weather fleck of tobacco. The cause of weather fleck of tobacco has baffled research workers. Weather fleck, sometimes called leaf spot, has caused annual losses in recent years in the Connecticut Valley and the lower Ontario area of Canada estimated in millions of dollars. In 1958, the first evidence was obtained that atmospheric ozone was the cause of weather fleck and research data are accumulating showing that this is the primary cause.

Ozone is usually detected in harmless trace quantities. It is formed by action of sunlight on certain air pollutants, notably products of combustion of fuels, especially petroleum. Under special weather conditions, ozone and possible other compounds may reach phytotoxic concentrations in air near the ground. Excellent correlation was obtained between outbreaks of weather fleck and high values for ozone. In tests conducted in cooperation with the University of California, leaf lesions, which were indistinguishable from weather fleck, were produced by action of ozone on tobacco plants in special chambers. This information will be most helpful in combating this serious problem.

35. Breeding of high amylose corn progresses. A new type of corn which has approximately 80 percent amylose starch has been developed in the cooperative research program at the Missouri Experiment Station. Ordinary corn starch contains about 27 percent amylose (long unbranched molecules). Starch chemists have indicated that if high amylose types - containing 80 percent or higher - could be developed, there would be many new industrial outlets for such corn starch. Previous strains had an amylose content as high as 50 to 60 percent, but this was not enough for direct commercial use. The high amylose characteristic is being introduced into agronomically acceptable hybrids. Research is being continued to develop still higher amylose percentages.

36. Grasses used in range seeding differ in rate of germination. In studies at Ephraim, Utah, some of the uncertainties involved in fall seeding of mountain rangelands have been explained by differential germination of grasses at low temperatures. At a constant temperature of 33°F. crested wheatgrass germinated in 18 days, smooth brome in 21, intermediate wheatgrass in 33, tall outgrass in 40, native mountain brome in 45 and slender wheatgrass and red fescue in 63 days. When seeds were planted in the ground at 5500, 7200 and 8850 feet

altitude on October 31 and November 1 and examined December 2 and February 28, only crested wheat showed satisfactory germination at the low temperatures occurring at these altitudes.

37. Improved cultural practices control stem rot of peanuts. New and practical measures for controlling the destructive stem rot diseases of peanuts have been developed through cooperative research in Georgia and Virginia. This disease, also known as southern blight, has caused \$10 to \$20 million losses annually to peanut growers in the Southern States. The new control measures consist of (1) plowing fields so that all surface debris is covered with clean soil to a depth of 3 to 4 inches; (2) planting on flat or slightly raised beds; and (3) cultivating so that no soil is thrown against the stems of the plants during the growing season. These practices have effectively decreased the incidence and severity of the stem rot disease and in Georgia in 1956 resulted in 32 percent increase in the value of Spanish peanuts. In Virginia experiments in 1957, use of the practices resulted in an 80 percent yield increase of Spanish and 78 percent yield increase of Virginia bunch peanuts.
38. Foreign plant introductions make valuable contribution to U. S. agricultural crops. More than 10,000 lots of plant materials were introduced during the fiscal year 1959. Special field explorations conducted in Belgian Congo and Angola, the Dinaric Alps of Greece and Yugoslavia, Near East and Mediterranean countries, Brazil and the southwestern United States and nearby Mexico, resulted in locating and bringing to this country germ plasm collections of: 3,200 field crops; 1,600 fruits and vegetables; 1,800 oilseeds; and 3,300 ornamental and special crops.

Because of the time required for breeding improved varieties, the value of new introductions is frequently not realized for many years. Several recent variety developments, partially attributable to the plant introduction program, are:

Lettuce. Two garden lettuce varieties introduced in 1936 from Czechoslovakia and Turkey, contributed to a new red-pigmented leaf lettuce variety, Ruby. It is a large, mid season, savoyed, slow bolting lettuce of excellent quality and wide adaptability.

Peas. An introduction from Peru in 1949 of a powdery-mildew resistant, non-edible pea, made possible the development of a new edible podded variety, Manoa Sugar, which is well adapted to the warm, lowland climate of Hawaii where mildew has been a limiting factor in pea production.

Tomatoes. A wild green-fruited tomato introduced from Peru was used in Indiana to produce a new variety Caro-Red which has ten times the concentration of provitamin-A that the standard variety Rutgers has.

Grapes. Twelve European developed, mildew resistant American-European grape hybrids, from among a large number of introductions, are currently being recommended in Illinois.

Chestnuts. Progenies from introduction of Chinese chestnuts, originally introduced to replace the blighted American chestnut forests as a source of tannin, have yielded a selection that produced seedlings with excellent characteristics as timber for the eastern United States.

Tall Wheatgrass. An introduction from Russia in 1932 has provided this country with the major germ plasm base for presently grown tall wheatgrass. One of the selections from this introduction has recently been named Alkar and has been released for farm and range use.

Chinese Holly. Introduced seeds of an ornamental holly from China in 1920 provided this country with a new globe-shaped, dark green, and glossy-leaved ornamental plant that bears bright red berries. Tests indicated wide acceptability in the South for hedge and specimen plantings.

New crops resulting from plant introductions include:

Guar. This crop has become firmly established as a new dry-land farming crop in the adaptable areas of Texas and Oklahoma. It is grown on more than 100,000 acres. The Texsel and Groehler varieties are selections from a single introduction of seed from India in 1936. The vegetable gum, mannogalactan, milled from the seed, is used in paper and textile industries for waterproofing of dynamite, preparation of oil drillers mud, concentration of ore in the flotation process and the preparation of cheese spreads, frozen desert mixes and cosmetics.

Safflower. This oilseed yields a high-quality drying oil for special purposes and has promise as a food oil. Safflower was grown on 200,000 acres in the United States in 1959. Its area of adaptability is somewhat limited, but expanded production will be possible through the breeding of new varieties with disease resistance and higher oil content.

39. U. S. National Arboretum. Contractual work supervised by the Bureau of Public Roads has been completed. Work included construction and surfacing of the $9\frac{1}{2}$ -mile road system, 3 stream culverts, 8 parking lots and pullouts, necessary drainage, much of the side grading and seeding, deepening of 2 ponds to yield backfill, and a section of stream bank protection. In addition, much roadside and pond grading and seeding has been done by the Arboretum labor force.

The third building in the shops area has been completed and occupied and the fourth is under construction. A greenhouse service building has been completed, also two open-sided public rain shelters, one in the azalea area and one facing Anacostia river in dogwood planting.

First-stage design and construction plans, with model, for a headquarters-laboratory building have been submitted to, and approved by, the District of Columbia Commission of Fine Arts.

Of the 816 plant accessions recorded during the past year, two-thirds were seeds, cuttings or scions, and one-third was young plants that required further growth in greenhouses or lath house. Most notable among these accessions were gifts of 743 fern clumps representing 33 species native to the East Coast, 10,000 narcissus bulbs, 24 species of plantain lilies, cuttings and scions of 75 different conifer cultivars and many additional viburnums. New planting projects have included the addition of several hundred rhododendrons in the Mt. Hamilton area, the development of fern valley with active assistance of the League of National Capital Garden Clubs, expansion of other plantings, particularly involving hollies, magnolias and dogwoods; and 2000 feet of access trails have been constructed. The distribution of plants and seeds to numerous institutes included 1300 azalea plants requested by the Royal Botanic Garden, Edinburgh.

The herbarium of 400,000 specimens formerly located at Beltsville has been moved to temporary quarters in the service area of the Arboretum. Additions to these collections have included the cataloging and incorporation of 11,000 sheets of the recently donated Ball willow collection.

Research continues in the classification of native hollies; in breeding programs in holly, rhododendron and magnolia; and in a newly instituted project involving viburnum. Two holly selections are in process of introduction.

Entomology Research

40. Insect pathogen controls tobacco hornworms and cabbage caterpillars. Sprays containing spores of a bacterium known as Bacillus thuringiensis gave excellent control of tobacco hornworms on tobacco in cooperative experiments in several Eastern States. This pathogen gave as good control as endrin, the most effective insecticide in use against this insect. Although endrin controls tobacco budworms as well as hornworms, it leaves an undesirable insecticide residue on the harvested crop. Spray applications of the pathogen have shown promise in the control of cabbage caterpillars and fall armyworms on cabbage, but not for the control of the tobacco budworm. The use of biological and chemical control methods for certain insects has the advantage that it reduces or eliminates insecticide residue hazards.
41. Systemic insecticides control cattle grub. Two new systemic insecticides, Co-Ral and ronnel, are now available to live-stock growers for control of the cattle grub, a pest that

causes annual losses of \$100 million. Co-Ral is effective when applied dermally to cattle, whereas ronnel must be given orally as a drench or bolus. Extensive field tests and large-scale demonstrations have provided 90 to 100 percent control of grubs when recommended dosages were applied after the cattle grub fly season ended and before the grubs appeared in the backs of cattle. Livestock men will profit due to increased weight gains and undamaged hides. Meat-packing companies estimate an average saving of \$7.50 per animal in trim loss alone where grubs have been controlled.

42. Artificial diet developed to rear boll weevils. The culture of boll weevils in sufficient quantities for laboratory testing has become a practical reality through the development of a synthetic diet that does not require aseptic techniques. Heretofore, boll weevils could be reared only when cotton plants or parts were available. Cotton was necessary for both nutrition and as a stimulus to egg-laying. A year-round supply of boll weevils made possible by this diet greatly accelerates the testing of both conventional and systemic insecticides, the study of resistance to insecticides, nutritional and physiological studies, and the development of weevil-resistant cotton. A special feature of the diet which has been developed is the use of an acetone powder of squares or bolls as the protein source. Contamination by microbes is prevented by mold inhibitors. This diet is an outgrowth of earlier pioneering research on insect diets with the pink bollworm and boll weevil in which aseptic techniques were used.
43. Progress made in biological control of weeds. Exhaustive feeding tests conducted in Europe with the larvae of a moth species - principle insect enemy of tansy ragwort ⁱⁱ showed that it will not feed on any other plants. The State of California and the Federal Interdepartmental Weed Committee have approved the introduction and release of this insect in California where tansy ragwort is a serious range pest. Attempts to colonize the moth are now under way in California. Approval has also been obtained to introduce a weevil from France for control of puncture vine - another serious pest of agricultural lands in California. The weevil destroys the seed pods of the weed and can live only on this plant.
44. Improved powder perfected for control of louse vectors of typhus. A new powder containing 1-percent malathion has been perfected for use in controlling human lice, the vectors of typhus fever. This powder is highly effective against lice that are resistant to the DDT and lindane formulations now in use. Availability of the malathion powder insures our Armed Forces of an effective means of combating lice in foreign areas where typhus is endemic. The World Health Organization plans to provide malathion powder to those areas where typhus control programs are under way.

45. Virus disease of citrus red mite discovered. A virus disease of the citrus red mite found in California is being studied to determine its possible usefulness as a natural control of this important citrus pest. The disease has been transmitted repeatedly under experimental conditions from sick and dead diseased mites to healthy mites. All stages of the mite, except the egg, appear to be susceptible. Water suspensions of the disease organism have retained infectiveness for several weeks. A laboratory unit has been established to produce material for field tests to evaluate the organism in controlling insecticide-resistant mites on citrus and other fruit trees. This appears to be the first record of a virus disease of mites.
46. Parasites introduced to control alfalfa weevil and Rhodes-grass scale. Four species of parasites imported from France and a fifth species obtained from California have been released in alfalfa fields in New Jersey to control the alfalfa weevil. Previous attempts to establish one of the French species in the United States failed because the adult females reabsorbed their eggs during ship and rail transit and could not be induced to resume egg production. Air transit appears to have circumvented the problem and laboratory reproduction of this species has been achieved. The species obtained from California was recovered in considerable numbers from one field two months after release.

A parasite known to be an effective enemy of Rhodes-grass scale in India has been introduced and released in Florida and Texas to combat this pest of range grasses. There are indications that it will persist and become established in Texas. It seems to be adapted to arid conditions characteristic of regions in Texas where a previously introduced parasite has not provided effective control.

47. Advance made in insecticidal control of the sugarcane borer. As a result of cooperative tests by the Department and the Louisiana Experiment Station, a granular formulation of endrin is now recommended and being used by growers on a large-scale for control of the sugarcane borer. Results of 3 years' field tests show that 4 applications of 2-percent endrin granules applied at 14-day intervals give superior control over that obtained with other insecticides. It is anticipated that the use of endrin will aid in reducing the loss caused by the sugarcane borer amounting to approximately \$7 million a year in Louisiana.
48. Safer insecticides and synthetic lures for gypsy moth. An intensive testing program has been carried out to evaluate a number of new insecticides to control the gypsy moth. Several compounds showed higher effectiveness against the moth and greater freedom from residue hazards and safety to wildlife than did DDT, which has been used in the control programs. In recent field tests with Sevin and Bayer 22,408 there was no observable effect on wildlife. Two other promising candidate insecticides are Phosphamidon and Dibrom.

Laboratory and field tests of nearly 2000 synthetic organic compounds and 150 botanical derivatives as lures for the male gypsy moth have revealed several synthetic materials that show appreciable attractiveness. To operate the scouting traps that are essential to the control program, it is now necessary to collect and rear large numbers of female gypsy moths and extract the extremely minute amounts of the natural sex attractant secreted by them. This is a difficult and costly process. Availability of a synthetic lure would permit an important saving in money and manpower..

Soil and Water Conservation Research

49. Optimum location and strength of streambank revetment determined.

Stream observations on Buffalo Creek in New York State have resulted in defining an orderly pattern for determining the placement of revetment for streambank erosion control. Application of the findings requires knowledge of (1) the average width of the channel, (2) the region of deposition in the stream bend, and (3) the stream bend radius. With such information the area of most potential damage can be predicted and heavier revetment utilized there, with less expensive material utilized in the remaining area of protection. This new concept should result in more economical streambank stabilization.

50. Evaporation control and rainfall concentration in crops boosts water use efficiency.

Results from field experiments at eight Great Plains locations in 1958 indicate great potential in evaporation control in growing crops. In this research, thin plastic film was applied to the soil surface as a partial or complete covering. Water use by the crop, yield of the crop, and other information was compared with that of noncovered areas. Where moisture was not excessively limiting to yield, water use by sorghum and corn ranged from 6 to about 12 inches where complete plastic cover was used. Without plastic cover, or where only partial cover was used, water use generally ran from 10 to about 20 inches for the season. Yields were generally as high or higher where either partial or complete plastic cover was used. This means that production per inch of water consumed (water use efficiency) was improved.

At North Platte, Nebraska, sorghum yields were 65 bushels per acre without plastic cover, 75 bushels with partial cover, and 78 bushels with complete cover. Corresponding water use for the season was 14.4 inches without cover, 15.1 inches with partial cover, and 5.3 inches with complete cover. In terms of grain produced per inch of water, 14.7 bushels per inch was produced with complete cover whereas only 4.5 bushels were produced without cover. Similar results were obtained at the other locations. Peak water use rates were reduced, rate of development of the crop hastened, and weeds controlled where plastic was used.

These studies indicate the great magnitude of evaporation in the growing crop and the potential of evaporation reduction in improved water use efficiency. Even partial evaporation control in the growing crop by this or similar procedures would permit elimination of the summer fallow practice throughout many areas where it is presently required. Such a practice would also greatly reduce water consumption in irrigated crops.

51. Leaching requirement theory tested for field use. The accumulation of excess salts in irrigated soils is a problem because salts are present in varying amounts in all irrigation waters. Leaching beyond the root zone must take place if a permanent irrigation agriculture is to be maintained. A knowledge of the quantity of water needed to accomplish the leaching is important. Recent studies provide support for the theory which defines "leaching requirement" as the fraction of the irrigation water applied that must pass beyond the root zone in order to maintain a given level of salinity in the root zone of the soil. Experimental data obtained from lysimeter studies agree closely with those predicted from the theory. Thus, it is concluded that the "leaching requirement" concept may be used with confidence in determining the amount of irrigation water required to maintain a given level of salinity in the soil root zone.
52. Rainfall in southeast has highest erosion-producing potential. In order to obtain the relative erosion producing potential of rainfall in various sections of the country, an erosion index was developed. This index is obtained by multiplying the rainfall energy by the maximum 30-minute rainfall intensity. Data computed over a period of 22 years from 78 stations in the eastern United States show that the erosion-producing potential of rainfall varies according to definite patterns. In general, the values range from the mid 80's in the northeast to about twice that magnitude in the Corn Belt and from 300 to 400 in the southeast. Thus, characteristics of the rainfall itself probably account in large part for the serious soil erosion encountered in the southeast. The computed rainfall data will be most useful in guiding erosion control programs.
53. Salts damage sensitive crops with sprinkler irrigation. Study of the effects of sprinkler irrigation on five fruit-tree species has been completed at the U. S. Salinity Laboratory at Riverside, California. Foliar absorption of chloride and sodium was most rapid in apricot and almond, intermediate in plum and orange, and very slow in avocado. Evening applications of sodium chloride resulted in lower accumulation and less leaf injury than midday applications. Leaf symptoms developed when sodium or chloride concentrations in the leaves were approximately 10-30 (milli-equivalent) per 100-gram dry weight. Plum was injured by the lowest concentrations. Dormant twigs and bark of almond and orange contained only small amounts of toxic ions indicating little carryover between growing seasons. A study on foliar absorption of salt

by strawberries has been initiated because of the recent emphasis on sprinkler irrigation of this salt-sensitive crop.

54. Water losses greatly affected by level of water table. The level at which water tables near the ground surface are maintained has a significant bearing upon the amount of water removed by evaporation and transpiration. On the Davie Fine Sands of Florida in 1955, 8.7 inches more water were extracted in 200 days by a crop of green peppers over a 12-inch water table than was extracted by the same weight of crop over a 24-inch water table. If the soil is left bare of vegetation, a 12-inch water table loses approximately 42 inches per year to evaporation as compared to no losses from a 36-inch water table. Comparisons with findings in Texas indicate that the losses from high water tables are considerably greater in less humid areas.

Such data are directly applicable to the design of release rates for reservoirs and have already been put to use in the design of canals and pumping stations in drainage districts. If the release rate or the seepage from a reservoir is great enough to sustain a water table near the ground surface, significant reductions in water yield may occur.

55. Orientation planting of corn saves moisture. Orientation planting - placing corn kernels with points down and flat sides with the row - looks promising as a means of reducing soil moisture loss through evaporation. Studies in Illinois showed that corn's natural growth pattern brings leaves out almost at right angles to the flat sides of the corn kernel. Orienting the seeds so that the leaves grow at right angles to the row direction resulted in up to 90 percent less sunlight striking the ground. This extra shading reduced evaporation from the soil surface. Also, the less jagged geometry of the leaves between the rows reduced wind turbulence which further helped conserve moisture. The method appears to have considerable practical importance in moisture conservation.
56. New type of nutrient imbalance discovered. In cooperation with the New Hampshire Experiment Station, a study was made of an abnormality observed when cows and calves fed timothy hay produced on intensively fertilized soils exhibited slow rate of growth and weak bone structure. The same symptoms were observed with experimental rabbits fed this hay under controlled laboratory conditions. A basal diet (containing 50 percent of the timothy) for rabbits, supplemented with calcium, potassium, magnesium, and phosphorus salts in all possible combinations, was studied subsequently. The findings demonstrated that, with a timothy-hay type ration which does not support growth, normal hemoglobin or bone ash levels could be rendered nutritionally adequate when supplemented with a salt of sodium, potassium, calcium, or magnesium carrying an anion capable of being oxidized to carbon dioxide and water by the animal body. It was concluded that under the dietary

condition of this experiment the rabbit suffers a physiological cation-anion imbalance or an acidosis, and that this condition is interrelated with the mineral metabolism of the animal. This mineral imbalance induces calcium and potassium deficiencies in the presence of apparently adequate dietary levels of these elements.

57. New method saves time and expense in fertilizer analysis. In cooperation with the Association of Official Agricultural Chemists, a method has been developed which permits determination of available phosphorus directly in the combined water and citrate extracts of a sample. The new method eliminates the necessity for separate determinations of total phosphorus and citrate-insoluble phosphorus, thus effecting an economy of some 50 percent in the analyst's time. It also greatly reduces operating costs in the more than 150 State, industry, and commercial laboratories concerned with quality control of the 17 million tons of phosphate fertilizers annually consumed in this country.
58. Improved fertilizer mixtures contain higher proportions of plant nutrients. The total concentration of primary plant nutrients (N, P_2O_5 , K_2O) in the domestic consumption of mixed fertilizers rose steadily from 21.9 percent in 1948 to 30.3 percent in 1958, an increase of 38 percent. The resulting saving in transportation, handling, and processing expenses per unit of nutrients has been a major factor in maintaining the cost of fertilizers to the American farmer at a lower level relative to that of other commodities purchased for farm production. Research in the Department, which has made and is making important contributions to higher analysis mixtures, include the development of fertilizer materials having superior physical and chemical properties; improvement in the handling, storage, and drilling characteristics of the mixtures through granulation and proper selection of the ingredients; reduction in use of inert filler; and formulation of products better adapted to meet the nutrient needs of specific crops.

Farm Economics Research

59. Net farm incomes generally higher in 1958. Net farm incomes were higher in 1958 than in 1957 on 29 of the 32 types of commercial farms for which annual estimates of costs and returns are now available (table 1). Production was higher in 1958 on 24 types of farms, and prices received were higher on 26. Much of the expansion in farm output was in "basic" commodities, prices of which were already at or near 1958 support levels. A substantial increase in prices of meat animals was also an important factor. On cattle ranches, for example, prices received averaged nearly 30 percent higher in 1958 than in 1957.

Prices paid for goods and services used in production were higher on most types of farms in 1958 than in 1957 but operating

Table 1.- Net farm income, commercial farms, by type and location, 1958, with comparisons

Type and location of farm	Average			1956	1957	1958 <u>1/</u>
	1937-41	1947-49	1948-57			
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
Dairy farms:						
Central Northeast	960	3,892	4,029	4,179	4,641	4,810
Eastern Wisconsin	1,480	4,365	3,837	3,456	3,656	3,360
Western Wisconsin	1,236	3,284	3,146	2,978	3,286	3,341
Dairy-hog farms:						
Southeastern Minnesota .	1,217	3,868	3,871	3,926	3,919	4,302
Corn Belt farms:						
Hog-dairy	1,642	5,639	5,796	5,108	6,339	7,448
Hog-beef raising	928	3,370	3,727	3,169	4,135	5,488
Hog-beef fattening	2,521	10,665	8,658	6,899	7,445	9,619
Cash grain	2,627	8,930	8,495	9,382	7,239	7,811
Poultry farms, New Jersey:						
Egg producing	---	5,975	3,875	2,326	2,127	2,693
Cotton farms:						
Southern Piedmont	495	1,565	1,776	1,570	1,529	2,473
Texas, Black Prairie ...	1,019	3,090	2,491	903	1,790	2,885
Texas, High Plains:						
Nonirrigated	1,675	6,411	4,143	2,526	6,718	9,265
Irrigated	---	10,761	10,945	12,594	11,228	17,819
Mississippi Delta:						
Small	---	1,923	1,802	1,714	1,271	1,344
Large-scale	---	20,465	21,018	20,383	12,020	13,598
Peanut-cotton farms:						
Southern Coastal Plains.	---	2,313	2,519	2,759	2,265	3,410
Tobacco farms:						
Kentucky:						
Tobacco-livestock	1,192	3,334	3,365	3,200	2,873	3,414
North Carolina:						
Tobacco-cotton	---	3,208	3,338	3,674	2,290	3,394
Tobacco-cotton (large)	---	3,923	4,158	4,944	2,779	4,430
Tobacco (small)	---	2,354	2,618	2,970	2,021	2,667
Spring wheat farms:						
Northern Plains:						
Wheat-small grain-						
livestock	872	6,323	5,007	6,930	4,053	6,867
Wheat-corn-livestock..	1,127	5,972	4,310	3,278	5,332	7,104
Wheat-roughage-						
livestock	533	5,370	4,012	2,899	4,475	5,032
Winter wheat farms:						
Southern Plains:						
Wheat	1,174	10,016	7,050	3,764	5,923	12,446
Wheat-grain sorghum ..	1,092	9,433	4,302	2,332	5,178	11,465
Pacific Northwest:						
Wheat-pea	2,764	11,864	12,404	13,363	15,040	9,645
Wheat-fallow	2,026	12,776	12,469	7,637	14,785	12,107
Cattle ranches:						
Northern Plains	954	6,439	4,954	2,108	4,164	6,409
Intermountain region ...	2,892	8,665	8,039	5,728	8,382	13,115
Southwest	---	5,698	3,898	-1,245	4,873	9,242
Sheep ranches:						
Northern Plains	2,711	6,914	7,975	6,057	10,949	13,289
Southwest	---	5,224	4,380	723	6,062	11,328

1/ Preliminary.

expenses per unit of production were generally lower. As a rule, increases in prices paid for production goods and services were more than offset by increases in productivity. Generally favorable weather was undoubtedly responsible for much of the increase in farm output and productivity.

Preliminary estimates of net returns for 1959 for 6 of the farm types in widely separated areas show lower net returns on 5 types and higher net returns on one type of farm. The returns ranged from a net loss on poultry (egg-producing) farms in New Jersey to an increase in returns of approximately 9 percent above 1958 on cattle ranches in the Intermountain region. Total production expenses in 1959 were higher on each of these 6 important types of farms. Prices received for products were mixed, ranging from 15 percent lower on poultry farms to 5 percent higher on the Intermountain cattle ranches. Net farm production was about 15 percent lower on winter wheat farms and slightly lower on Central Northeast dairy farms. It was above 1958 on the other 4 types of farms.

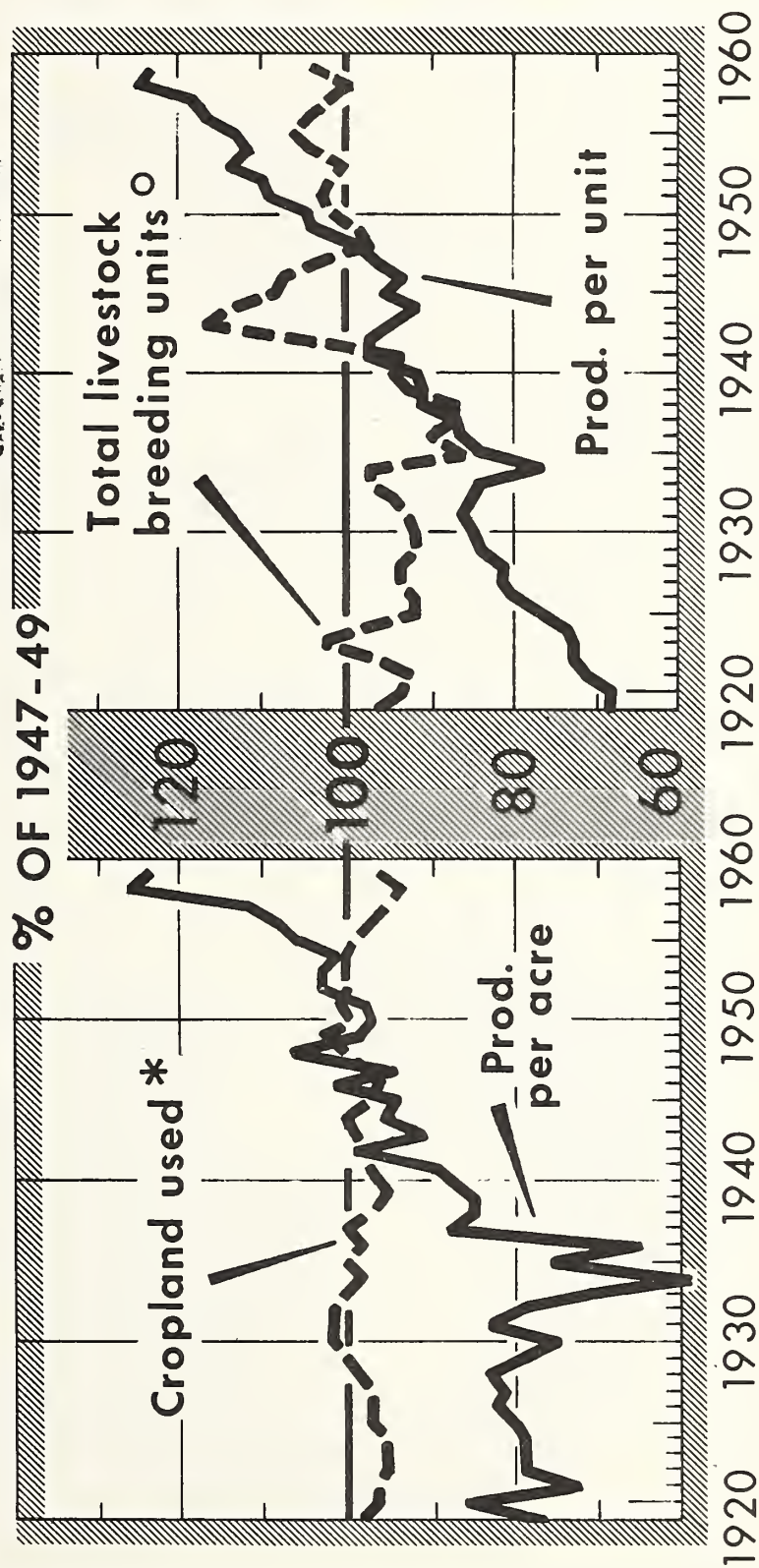
60. New record farm output achieved in 1959. Total farm output for the United States in 1959 was 25 percent above the 1947-49 average and one percent above the previous record set in 1958. This record achievement resulted from the combination of an unprecedentedly large production of livestock and a record equalling crop output in 1959 (figure 1).

Total livestock production in 1959 continued the upward trend that started in 1948. Production was over 2 percent larger than in 1958 and 28 percent above the 1947-49 average. Record outturns of meat animals and poultry products and near record outturns of dairy products were attained. Animal units of breeding livestock increased 4 percent in 1959 compared to 1958, but livestock production per breeding unit decreased almost 2 percent.

Crop production in 1959 equalled the 1958 all time record. Total production of feed grains and of sugar crops attained new record outturns. The first 4 billion bushel corn crop was produced in 1959. Total production of corn and cotton increased 16 and 29 percent respectively compared with 1958. These crops, along with sorghum, sugar beets, sugar cane, and dry peas, set new high yields per acre. The total acreage of cropland used for crops increased about 2 percent in 1959 compared to 1958, while crop production per acre decreased 2 percent.

61. Market values of farm real estate in 48 States (excluding Alaska and Hawaii) continued to advance in the 4 months ended July 1, 1959. However, the rate of increase was less than in previous periods. Values were essentially unchanged from their March level in 24 States (figure 2). The national index of average value per acre advanced to 169 (1947-49 = 100), 1 percent above March 1 and 6 percent above a year earlier.

FARM PRODUCTION PER ACRE AND PER ANIMAL



*ESTIMATED ACREAGE FROM WHICH ONE OR MORE CROPS WERE HARVESTED
PLUS ACREAGE OF CROP FAILURE AND SUMMER FALLOW

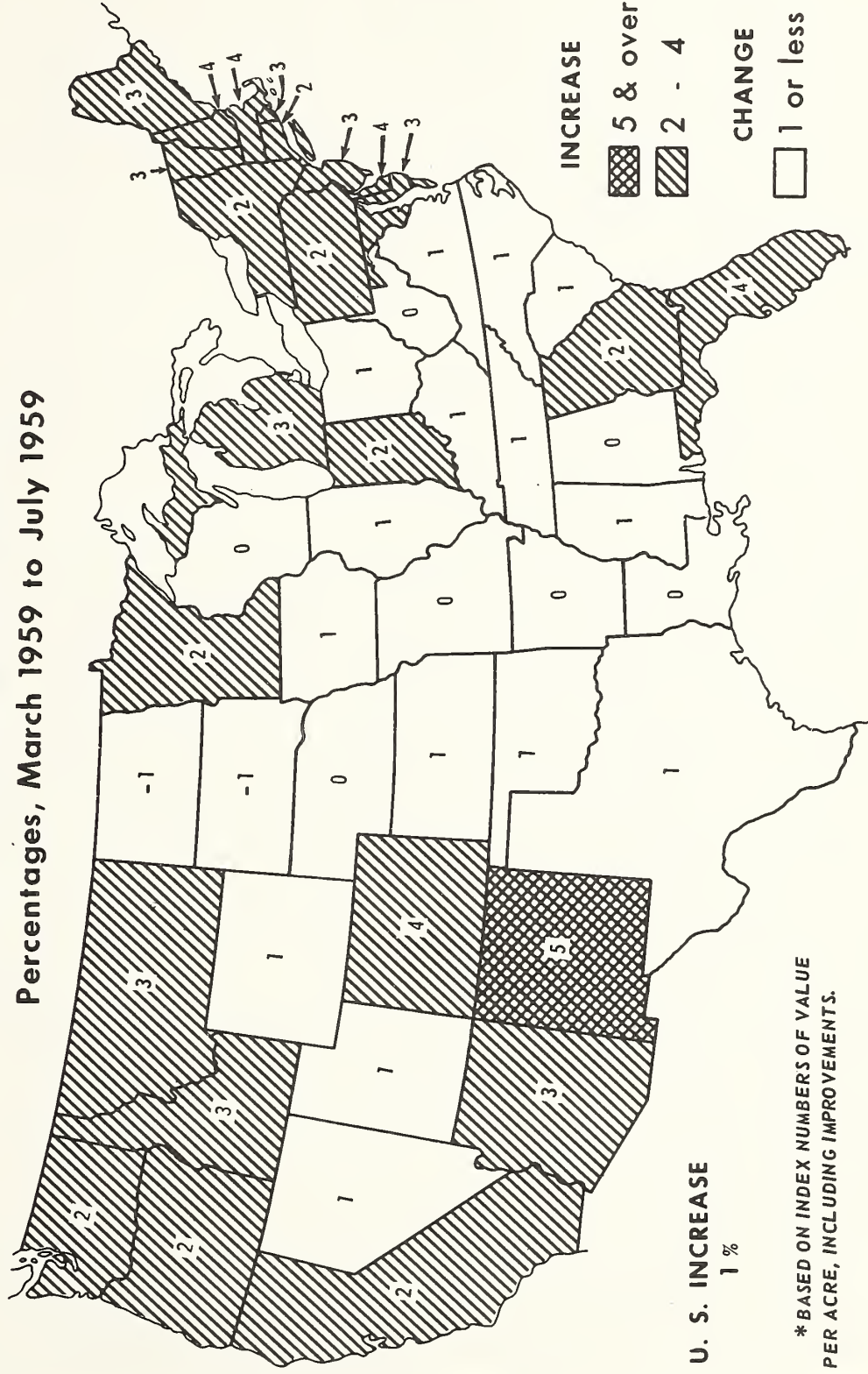
O INCLUDES ALL BREEDING LIVESTOCK EXCEPT HORSES, AND ALL LIVESTOCK PRODUCTION
EXCEPT FARM-PRODUCED POWER OF HORSES AND MULES

Figure 1



CHANGE IN DOLLAR VALUE OF FARMLAND*

Percentages, March 1959 to July 1959



*BASED ON INDEX NUMBERS OF VALUE
PER ACRE, INCLUDING IMPROVEMENTS.

Figure 2

The total market value of farm real estate was estimated at \$126.6 billion on July 1.

Land values have increased continuously since early in 1954. A part of this increase represented a return to the pre-World War II relationship between farm income and land values, but present indications are that values have increased a little more than may be warranted by current and prospective levels of farm income (figure 3). The residual net return on the market value of farm real estate declined to about 3 percent in 1959 and is expected to be a little less in 1960. This would be the lowest rate of return since the mid-1930's, and about the same as in 1910-15 and 1925-29.

Active farmers bought about three-fifths of all farms and parcels of farmland sold in the year ended March 1, 1959. More than 40 percent of all purchases were for purposes of farm enlargement, about double the proportion a decade ago. Nonfarmer buyers bought a little more than a third of the farms and tracts sold, about the same proportion as in previous years.

As in the previous 3 years, two-thirds of the farm land purchases in 1958-59 were financed with some form of credit. The debt incurred averaged 64 percent of the purchase price. Sellers were the most important source of credit, providing all the credit used for 43 percent of all credit-financed transfers in 1958-59. About half of the seller-financed transfers in 1958-59 involved the use of sales contracts rather than conventional mortgages; this was about double the proportion in 1946. However, the use of contracts and the relative rates of increase varies considerably by areas (figure 4). The land contract is a credit device that permits lower downpayments than are available from credit agencies because the seller retains title to the property until all payments, or a predetermined proportion of the purchase price, has been paid.

62. Farm debts continue rapid rise. Total estimated farm debt (exclusive of price support loans) was \$20.8 billion on January 1, 1959. This was an increase of 10 percent from the \$19.0 billion outstanding a year earlier. The total was about 10 percent of the value of all farm assets at the beginning of 1959. Farm-mortgage debt amounted to \$11.3 billion on January 1, 1959, the highest total recorded since farm-mortgage debt estimates began in 1910. The increase during 1958 was 7 percent. Non-real-estate debt increased 12 percent in 1958 and amounted to \$9.5 billion at the beginning of 1959. The non-real-estate debt held by banks and federally-sponsored agencies was \$5.8 billion on January 1, 1959, an increase of 16 percent from the year earlier (figure 5).

The uptrend of farm debt continued in 1959. Indications are that on January 1, 1960 the farm-mortgage debt will be at least

6 percent higher, and the non-real-estate farm debt 12 percent higher, than at the beginning of 1959.

The rates of increase in both farm-mortgage and non-real estate debt were larger in 1958 and 1959 than in the previous years and reflected increased expenditures for feeder cattle and farm machinery, a continuing strong demand for farm real estate, and generally good availability of farm credit.

63. Tax payments on farm real estate rise. These payments amounted to \$1,103 million in 1959, or 5.7 percent more than in the preceding year. This estimate is based on a survey of taxes levied on farm real estate in calendar year 1958. Since the close of World War II these taxes have been rising at a rate of more than 5 percent a year. In 1959, tax payments absorbed almost 8 percent of net farm income before real estate taxes, a proportion more than $2\frac{1}{2}$ times that of 1945 (figure 6).

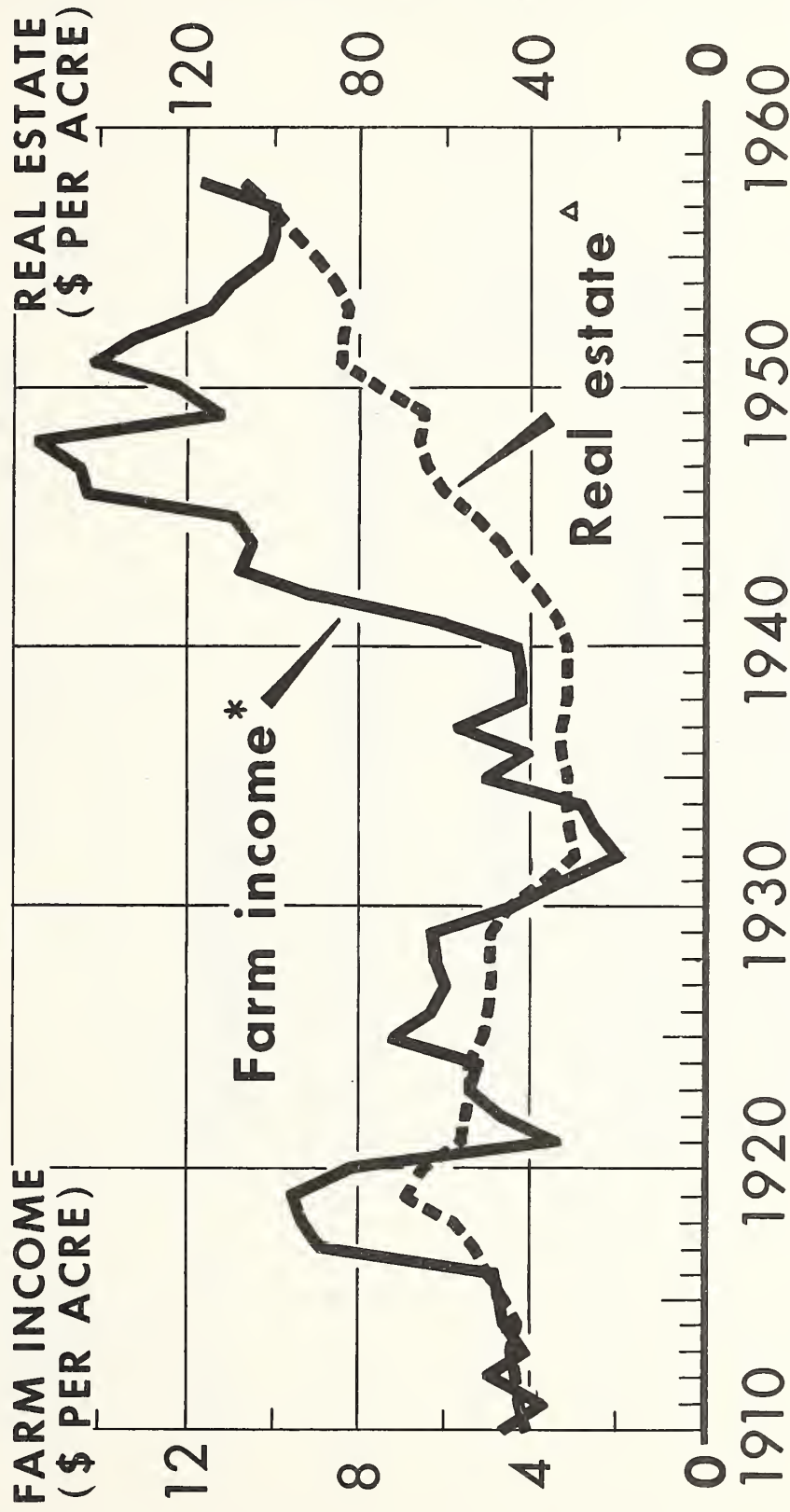
The rise in farm real estate taxes has been more rapid in areas near cities. In 1959 taxes paid on farm properties in standard metropolitan areas showed an increase of nearly 8 percent, compared with a rise of 4 percent in the rural counties. The cause lies chiefly in the rapidly increasing requirements for local governmental services for new suburban communities. Difficulties of assessing farm properties also are acute in suburban fringe areas, with the result that assessment inequalities are especially pronounced.

64. Statistical series of increasing importance. Statistical series to measure and explain changes in the farmer's situation are becoming of increasing importance in view of the rapid technological changes that have taken place in agriculture. The value of these series has increased substantially as the coverage has been widened and new series added. Especially important during the past year has been the development of a new series measuring production inputs in agriculture in total and by categories. The regional series on farm production, man-hours of farm work, and closely related series have been developed for the 10 farm production regions. Additional situations are being covered in the costs and returns series. Data for wheat-fallow farms were published for the first time in 1959. Coverage of the financial situation of agriculture has been expanded to provide information on interest rates of major lending institutions on a quarterly basis.

The major statistical series prepared include the following:

- (1) Financial situation including measures of farm mortgage credit, short-term credit, financial assets held by farmers, and the Balance Sheet of Agriculture.
- (2) Farm taxes and insurance.

FARM INCOME AND REAL ESTATE VALUES



DATA FOR 1958 ARE PRELIMINARY

* NET FARM INCOME, INCLUDING INVENTORY CHANGE

Δ FARMLAND AND BUILDINGS ON MARCH 1 OF THE FOLLOWING YEAR.

Figure 3

PURCHASES BY LAND CONTRACTS

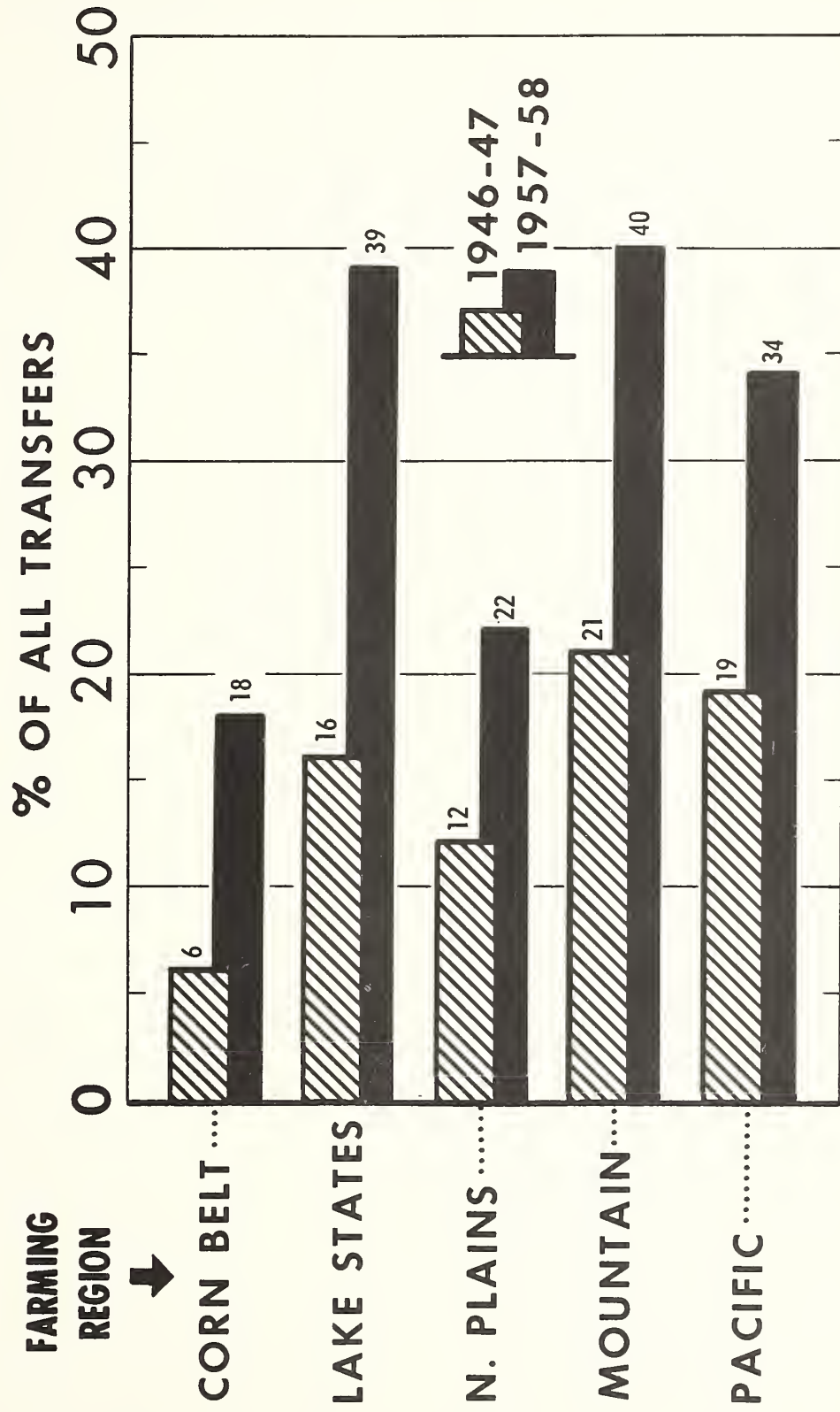
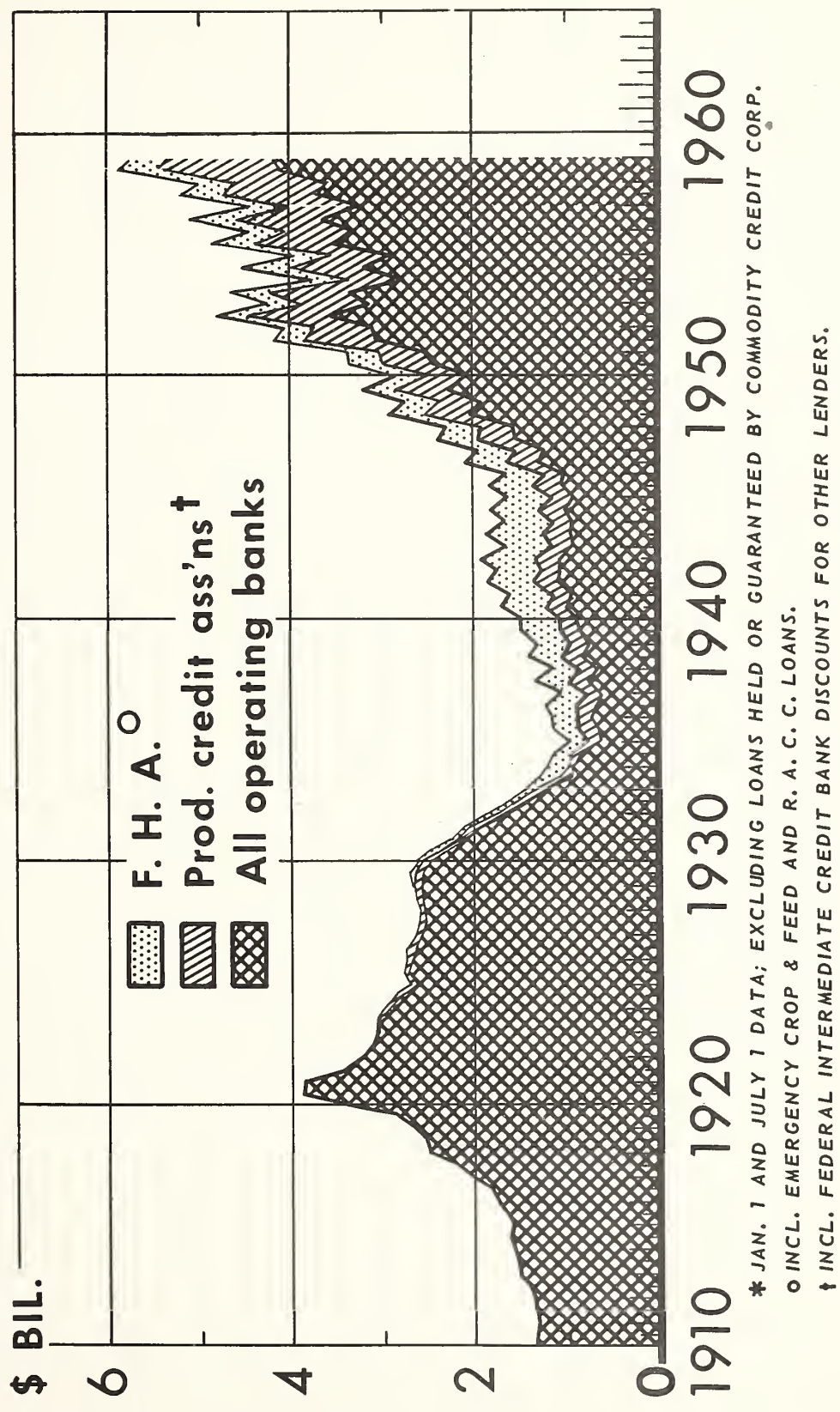


Figure 4



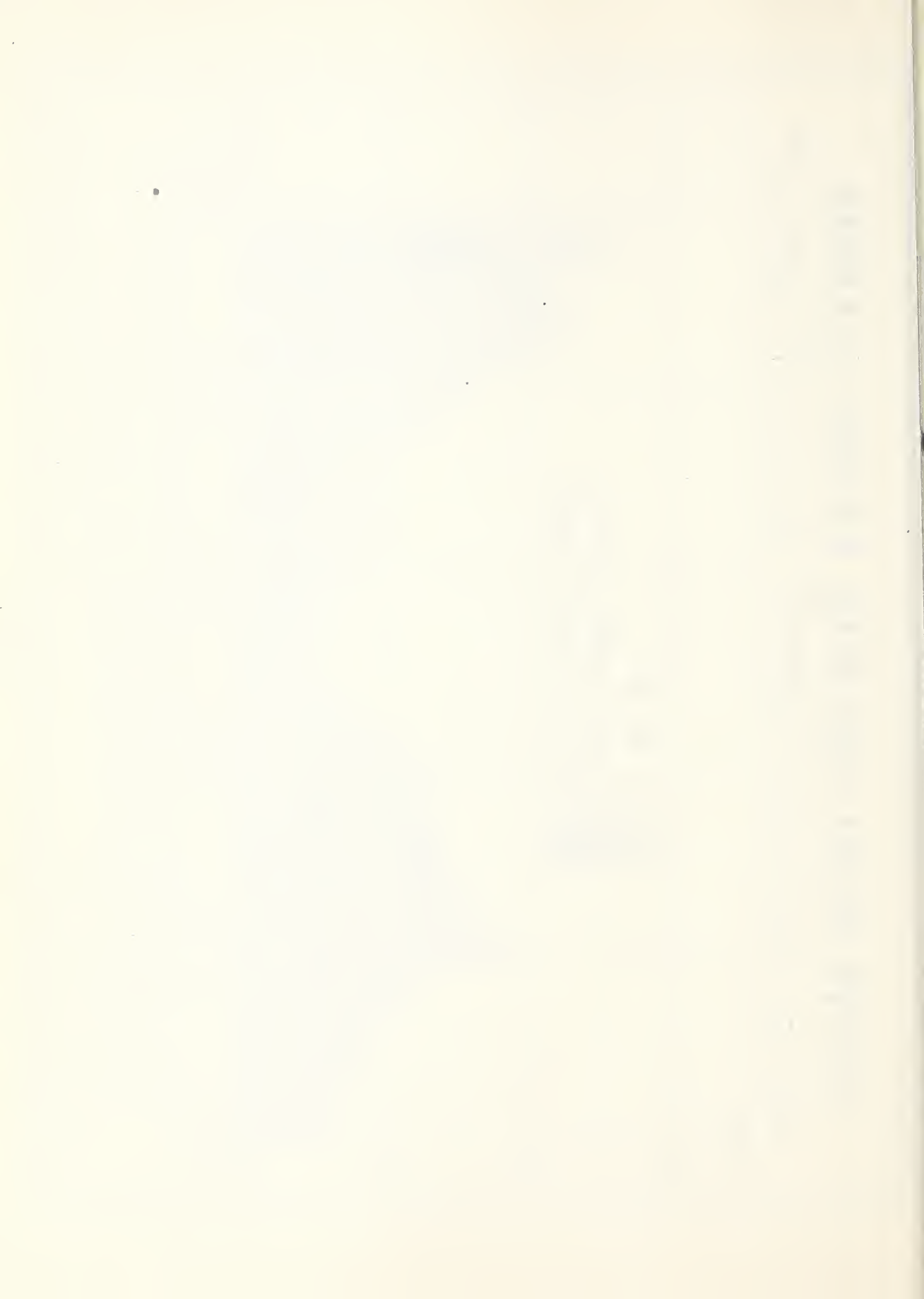
NON-REAL-ESTATE FARM LOANS

*Held by Banks and Federally Sponsored Agencies**



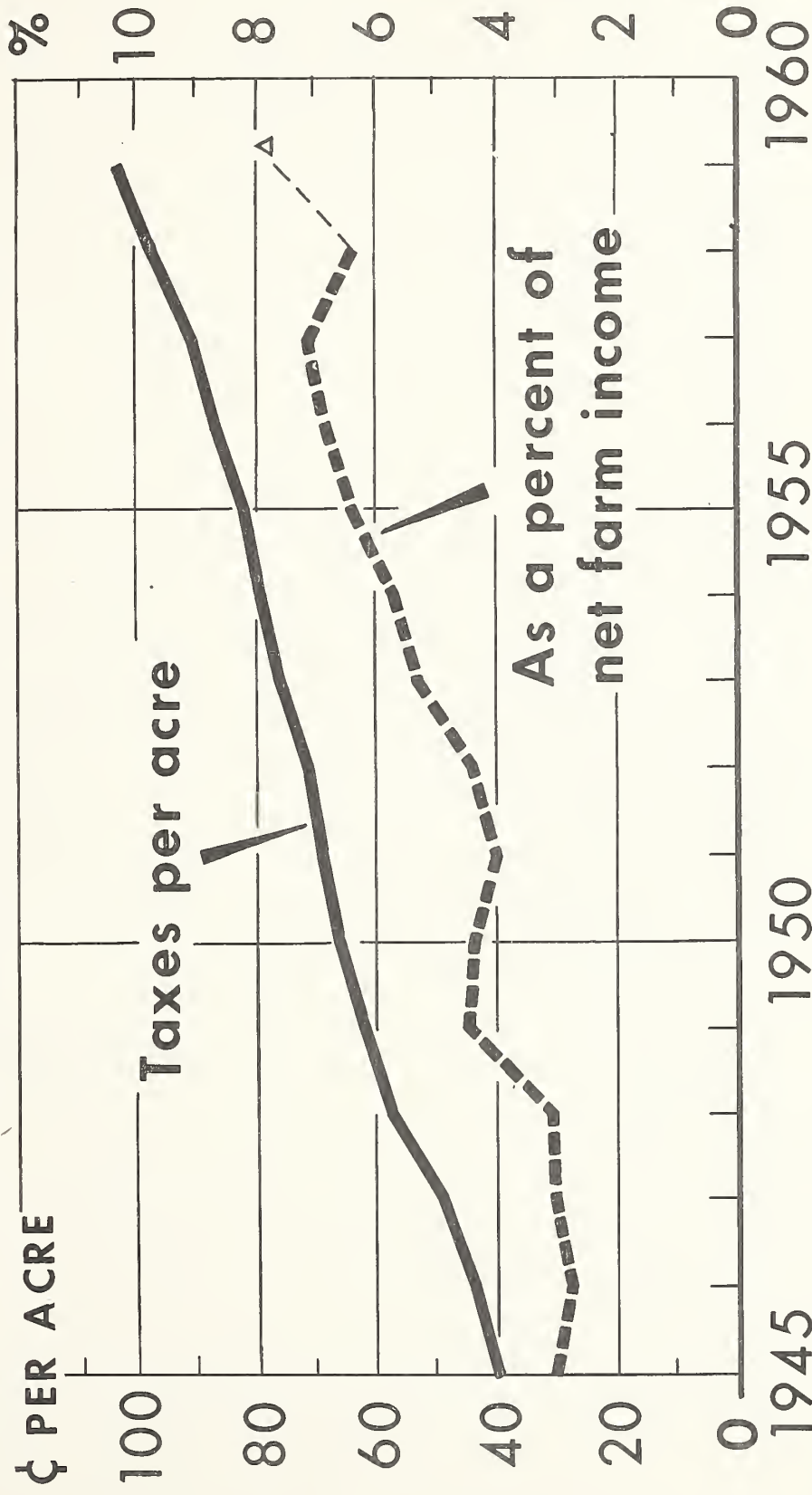
* JAN. 1 AND JULY 1 DATA; EXCLUDING LOANS HELD OR GUARANTEED BY COMMODITY CREDIT CORP.
 o INCL. EMERGENCY CROP & FEED AND R. A. C. C. LOANS.
 † INCL. FEDERAL INTERMEDIATE CREDIT BANK DISCOUNTS FOR OTHER LENDERS.

Figure 5



FARM REAL ESTATE TAXES PAID

Taxes Per Acre, and as a Percent of Net Farm Income *



* NET FARM INCOME BEFORE REAL ESTATE TAXES AND RENT TO NONFARM LANDLORDS Δ PRELIMINARY



- (3) Farm costs and returns of commercial family-operated farms.
 - (4) Farm production, production inputs, and productivity.
 - (5) Farm land values.
 - (6) Numbers of principal farm machines.
 - (7) Feed utilization, including feed consumption by livestock, number of animal units fed, and livestock production units.
 - (8) Use of fertilizer.
 - (9) Labor used on farms and productivity by enterprises and regions.
65. Conservation reserve reduces production in Maine potato area.
A field survey of farm owners in Aroostook County, Maine who are participating in the program, indicates that substantial reduction in production is being achieved on participating farms at payment rates that provide modest returns from investments in farm property. The reduction in value of crop production at 1958 prices, per dollar of annual rental payment, averages as follows: \$13 under 1957 and 1958 regular programs, \$9 under the 1958 experimental bid program, and \$5 under the 1959 program. Rental payments after real estate taxes per \$100 of farm real estate value, on farms with all eligible land in the program, average as follows: \$1.50 under 1957 and 1958 regular programs, \$5.20 under the 1958 experimental bid program, and \$6.40 under the 1959 program. More commercial farms are participating in 1959 than in earlier years as rental rates have increased. Also, in 1959, rental rates on individual farms are determined by land productivity ratings.
66. Tobacco allotments a major factor in determining land values.
A study of the effect of the tobacco production control program upon land values indicates that a substantial part of the benefits of the program are attached to land. On the basis of an analysis of 213 farm transfers in Pittsylvania County, Virginia in the period 1954-58, the value of the tobacco allotment was estimated at \$5,649 per farm or 55 percent of the average sale price. The trend in the estimated per-acre value of allotments has been markedly upward in recent years, increasing from \$962 in 1954 to \$1,673 in 1957. The owner of the land at the time of program initiation appears as the major beneficiary, with a corresponding reduction in benefits available for succeeding owners and operators.
67. Regional adjustments in grain production to eliminate surpluses.
A preliminary study indicates that as much as 30 million acres of high-production-cost land would be withdrawn from pro-

duction of wheat and feed if average annual output were brought into line with demand by discontinuing production in areas that are at a disadvantage because of high production costs. Using several spatial and programming models, estimates have been made of the comparative advantage among 104 areas in the United States in the production of wheat and feed grains. The main Corn Belt and wheat areas would, in general, remain in production. The areas where cost disadvantages were indicated include areas such as eastern Colorado and New Mexico, limited parts of Kansas, Oklahoma and Texas, and major portions of both the northern and northeastern dairy areas and the Southeast.

The year 1954 served as the basis for relating output to requirements for this preliminary study. A more inclusive model is now being constructed which includes non-grain crop and livestock activities. Solutions of such models can provide a starting point for designing programs to encourage regional adjustments in grain production. Current research techniques can provide a better means than uniform deviations from historical acreage and production patterns for bringing the structure of agriculture into line with economic development trends.

68. Long-term projections made of land use needs. Studies of long-term agricultural requirements based on a population of 370 million and corresponding projections as to economic growth indicate that with projected economic attainable yields, 122 million acres more cropland will be needed by the year 2010. Of this, 97 million acres would be a net addition, while 25 million acres would be needed to replace cropland absorbed by urban growth. A total of 575 million acres of cropland would be required 50 years from now, compared to 478 million acres in 1950 at the economically attainable levels. The land available for permanent pasture would be less than in 1950, with increased forage production to meet livestock requirements dependent upon more intensive use. Nonagricultural uses of land would rise from 105 million acres in 1950 to 190 million acres in 2010, or an increase of 85 million acres. Meeting requirements of the magnitude indicated will necessitate more rapid development and the application of improved technology and management of land and water resources for cropland in use, and the bringing of additional acres into production.
69. Increased farm output heavily dependent on higher yields. A recent study throws new light on the changing sources of increased farm output. Nearly 45 percent of the increase in output during the last 15 years came from the large increase in crop production per acre as compared with about a 33 percent increase during the period 1920-39. The greater quantity of fertilizer used on farms was a major factor in the step-up in farm production during the World War II and postwar years. It accounted for more than half of the increase in crop production per acre.

A greater volume of product added by livestock accounted for a fourth of the additional output during World War II and the postwar years. Use of land released by the shift from animal to tractor power to produce products for sale accounted for less than a fourth of the increased farm output in postwar years as contrasted with more than one-half during the 1920-39 period. Total changes in cropland acreage and pasture production have been relatively unimportant as sources of increased farm output.

70. Industrial development improves incomes in low-income rural areas. Studies in selected low-income areas in 15 States indicate that the extent of nearby industrial development is an important factor affecting the income of employable farm people in those areas. One of the major low-income areas recently experiencing large industrial growth of its own and lying in close proximity to other large industrial growth centers includes 24 northeast Texas counties. Findings from a random sample of 1,189 open country households in this area reveal that under the influence of industrial development, very few able-bodied high school graduates under 45 years of age have remained in full-time farming. Fulltime farmers with these characteristics accounted for less than one percent of all family heads in the study sample.

Nearly 30 percent of the area's farm families, however, still had money incomes in 1955 of less than \$1,000. These extremely low incomes now occur mainly among families headed by persons who are 65 years of age or over, have a permanent physical condition limiting the kind or amount of work they can do, or are females. Only 10 percent of the farm families in this low-income class had able-bodied male heads under 45 years of age.

Studies of the incomes and resources of open country families in areas of Louisiana, Mississippi, Georgia and Florida that are less accessible to industrial employment indicate a lower general level of incomes among farm families and more frequent occurrence of low incomes among families with able-bodied male heads.

71. Size of ownership unit and farm consolidation increasing in the Great Plains. Studies of rural land ownership and farm tenure in the Great Plains show considerable growth in the average size of both ownership and operating units. The average size of ownership unit increased from 570 acres in 1945 to 643 acres in 1958. Little change occurred during this period in the concentration of ownership as between large and small farms. One-fourth of the individual owners were non-operating landlords and owned one-fifth of the farm and ranch land in the Great Plains States. Three-fourths of the owners operated at least part of the land they held. Private corporations make up less than one percent of all landowners, but owned about 8 percent of the farm and ranch land.

About one-fifth of the farm operators interviewed were planning to increase their farm acreage in the immediate future, indicating a further movement toward farm consolidation. The land market in the Great Plains is mainly a parcel market which involves the purchase and sale of tracts of land rather than of complete farms. The majority of transfers are between farmers. Sellers are mainly farmers who are leaving agriculture or who are reducing the scale of their operations. Buyers are also mainly farmers who are looking for land to add to their present farms. They often attach extra "site value" to a particular tract of land that is well located with respect to their present farm.

72. Widespread credit needs in the Great Plains. A study of the financial and credit situation in the Great Plains showed that in mid-1957 about three-fourths of all farmers had debts of some kind and nearly half had applied for loans or requested credit in the previous twelve months. Young farmers were more likely to have debt and to have requested credit than older farmers, and large-scale farmers used more credit and had more debts than small-scale farmers. Over 90 percent of the farmers who applied for loans or requested credit received at least part of the credit they requested. Generally, owner-operators were more successful than tenants in obtaining as much credit as they asked for, and large-scale farmers were more successful than the operators of small farms. Banks were the most common source of credit reported, and merchants and dealers were next.
73. Herringbone milking parlors reduce labor and investment costs. The building and equipment cost is only \$184 per cow milked in the double-4 herringbone parlor as compared to over \$200 for a conventional milking parlor, and nearly \$400 for a stanchion barn, according to a recent study of alternative dairy systems. In two hours a skilled operator can milk a herd of approximately 85 cows as compared to about 60 in a conventional milking parlor or a stanchion barn. Operating costs, other than labor, are estimated to be lower for the milking parlors than for the stanchion-barn systems. Adoption of the herringbone milking parlor will encourage larger dairy farms.

Agricultural Engineering Research

74. Controlled temperature increases gain for summer-fed hogs. Research in cooperation with the California Experiment Station on controlled environment in summer for growing pigs has shown important gains over the uncontrolled environment. Gains of 2 pounds or more per day were obtained with pigs weighing 80 to 220 pounds when the indoor temperature was controlled at about 65°F. This gain is 33 percent more than was obtained with control pigs of the same type fed the same ration outdoors at locations with higher temperatures. This occurred even when the controlled pigs had the best of comfort aids, including wallows, shades, fans

or access to an air conditioned room several degrees cooler than the outdoor air. This basic research indicates the importance of controlled environment in livestock production. Providing such environment may prove feasible under some conditions.

75. Inside sharpening of disk blades found advantageous. Basic research on tillage devices at the National Tillage Machinery Laboratory at Auburn, Alabama conducted in cooperation with industry has established the advantage of inside over outside sharpening. The blades hold their sharp edge longer and require less sharpening. As a result of this research several companies have changed to inside beveled disk blades and will thus supply farmers with more effective and efficient implements.
76. Cotton ginning equipment improved. Ginning cotton with a spike core seed roll accelerator and related increase in gin saw speed resulted in an average increase of about 60 percent in gin saw capacity with experimental equipment at the U.S. Cotton Ginning Research Laboratory, Stoneville, Mississippi. Tests are continuing with seed-roll-turners. Moving gin trash in a high-pressure small-pipe system required about 5 H. P. as compared to 25 to 50 H. P. in the conventional large pipe system in tests at the Cotton Ginning Research Laboratory at Mesilla Park, New Mexico. Tests are continuing with the equipment to adapt it for use in commercial gins.
77. Improved potato seed cutter reduces peak labor requirements at planting time. This cutter, developed at the Department's Potato Research Center at East Grand Forks, Minnesota handles all sizes of potatoes, even those weighing more than half a pound. It has enough capacity to keep one field planter in operation under average conditions and eliminates the 3 to 4 workers required to cut the larger potatoes when a conventional cutter is used, or the 7 to 8 workers required if the entire task is done by hand.
78. Automatic horizontal silo unloader developed. In cooperation with the Washington Experiment Station, a machine to remove silage automatically from horizontal silos has been designed, built, and is being tested at Puyallup. This unloader, in combination with a conveyor-bunk feeding system and necessary electrical controls, can eliminate most of the 1.03 man-hours of labor per ton required in manual operation.

UTILIZATION RESEARCH AND DEVELOPMENT

Current activities: Investigations are conducted in the field of chemistry and related physical and biological sciences to develop industrial chemicals, new and improved foods, feeds, drugs, fabrics, and other products from agricultural commodities. New methods for evaluating the suitability of commodities for processing, and improved processing methods are devised and tested. Ways are sought to increase the use of byproducts. The purpose is to effect maximum utilization of agricultural commodities.

Selected Examples of Recent Progress

1. Industrial uses of corn expanded. Cooperative efforts by chemists, corn breeders, and industry have resulted in two companies producing 250,000 pounds of high-amylose corn starch from the 1958 crop of a new hybrid, high amylose corn. This new starch contains 55 to 60 percent amylose, the component of starch with properties that make it attractive for industrial uses. Production of this new starch in semicommercial quantity has made possible its extensive evaluation for industrial application as paper additives, textile sizes, adhesives, and packaging films. Finding of an 80 percent amylose corn has stimulated research efforts to develop a series of "tailored" corns containing high-amylose starches for industrial needs.

Two industrial companies are now producing semicommercial quantities of dialdehyde starch from corn and are planning expansion. Both companies are using the Department's improved two stage electrolytic process, which simplified manufacture and reduced production costs. Research has demonstrated usefulness of dialdehyde starch in leather tanning and as an agent for producing wet-strength paper. Other promising outlets include adhesives and binders, oil-well drilling additives, gelating conditioners and film-hardeners, textile processing aids, and as a chemical intermediate. The unusually high response to advertisements and announcements of the availability of the commercial products indicates extensive use-research by industry for applications of this new material, and potentially larger markets than anticipated.

Zein, a protein component of corn, has been chemically modified to produce a water-soluble product having a variety of industrial uses. The major manufacturer of zein has adopted this new process and has reported wide commercial acceptance of the product. Water-soluble zein produces hard, tough, grease-resistant films that are desired in a variety of applications. Industrial uses are in rubless floor polishes, adhesives, printing inks, leather finishes, films and protective coatings, pharmaceuticals, and cosmetics. The new product offers promise of greatly expanding outlets for this corn protein.

A survey of microorganisms capable of transforming corn sugar into new substances has resulted in the development of a soluble gum called phosphomannan. It is readily soluble in water to give clear viscous solutions. Extensive evaluation by over 30 companies, 4 of which are studying it from the production viewpoint, reveal uses in foods, pharmaceuticals, cosmetics, paper, and other applications as a thickening, stabilizing, dispersing, and suspending agent.

2. Use of frozen bakery products increases. Over 60% of the Nation's bakeries have installed freezing facilities. Department research has provided basic information on the effect

of temperature, air velocity, and relative humidity on freezing and thawing rates, and on the stability of frozen bakery products during and subsequent to processing. It has been found that bread and other bakery items each must be handled according to individual requirements. Freezing leads to greater plant efficiency and economy of production by eliminating peak loads with consequent reduction of overtime. At the same time, better products are available to the housewife. This new processing procedure provides fresher, tastier, baked goods for consumers.

3. Stabilization of dehydrated alfalfa commercialized. A practical method of stabilizing the nutrient value of dehydrated alfalfa and other forages has been developed. The principal value of dehydrated forages as ingredients of mixed feeds is dependent on their content of provitamin A (beta-carotene), vitamin E, and xanthophyll. Unfortunately, when the forage is stored for winter use these valuable components are rapidly destroyed by natural oxidation. Of several hundred chemicals screened as stabilizing agents for these components, one, sold under the trade name of Santoquin, was found to be effective. Applied at a rate of about one half pound per ton and at a cost of not over \$1.00, about 3/4 of the unstable nutrients are retained over a storage period of 6 months as compared to a 1/4 retention for untreated forage stored under the same conditions. Forty alfalfa dehydrating companies, representing a large proportion of dehydrated alfalfa production capacity, have been granted licenses to use this development under the Department's public service patent.
4. Radically new method of carding cotton shows great promise. The textile industry has enthusiastically responded to the announcement in April 1959 of a major modification made in the cotton carding machine to improve its operation. This modification, which is the only major change made in the carding machine since its invention 200 years ago, effects a significant reduction in manufacturing costs. This is accomplished by replacing cumbersome wire combs with a lighter weight, granulated metal surface. Commercial mill tests show a saving of much of the spinnable cotton fibers normally removed as waste by the conventional carding machine. Ten firms are already licensed to produce the equipment now known as the SRRL Granular Card; about 20 industrial installations have been made.
5. Improved flame retardant finish for cotton meets requirements of Army Quartermaster Corps. A new flame retardant, APO-THPC, developed in cooperation with the Quartermaster Corps, is superior to other flame retardants for cotton. Fabrics treated with APO-THPC are not only resistant to burning, but also resist shrinkage, mildew, rot and wrinkling. The treated fabric retains these properties after repeated laundering and dry cleaning. The Army Quartermaster Corps considers that the APO-THPC flame retardant finish meets its current requirements for a satisfactory flame retardant on cotton fabric

for certain military uses. A textile mill, which has made successful pilot plant applications of APO-THPC to various fabrics, plans a large run on work clothing fabrics for civilian use.

6. Citrus protected from mold infestation. Nearly all citrus fruit being sold domestically or shipped to overseas markets is now treated with biphenyl, a mold retardant. Safety of this product has been established through cooperative research between the Agricultural Research Service, Agricultural Marketing Service, State Experiment Stations, and the citrus industry. The minimum concentration of biphenyl required for adequate protection has been defined, procedures developed for its application, and it has been demonstrated clearly that its use results in no health hazard.

This treatment almost eliminates losses due to spoilage by molds during storage and transit. These losses, once as high as 50 percent in export shipment and 15 percent in domestic shipment, formerly cost the citrus industry several million dollars each year. This development has resulted in expansion of existing overseas markets and is opening up entirely new markets which formerly could not be reached because of excessive spoilage during transit.

7. Plastic foams made from modified castor oil. An economical chemical process for altering the properties of castor oil extends the potential usefulness of castor oil in the manufacture of types of lightweight plastics known as urethane foams. Foamed plastics made with this chemically-modified castor oil possess distinctly improved water resistance and shrinkage characteristics. Excessive water absorption is one of the major limitations of urethane foams generally. Urethane foams are being used in increasing quantities for upholstering materials, thermal and 'acoustical' insulation, foamed-in-place crash pads, lightweight structural materials, and numerous specialty products. Approximately a million pounds of unmodified castor oil were used in 1958 to produce urethane foams. Development of this economical process for producing foams with significantly improved properties provides a potentially greater use of castor oil in this rapidly expanding industry.
8. New chemical from turpentine used in the production of synthetic rubber. Turpentine can be transformed into excellent catalysts or initiators (peroxides) for the manufacture of "cold rubber". Both the product and the process are protected by patents assigned to the Secretary of Agriculture. Licenses have been issued for the use of these patents to large chemical and rubber manufacturers. About 2,000,000 pounds of peroxides are currently used per year in the production of synthetic rubber. It is estimated that 90 percent of the current annual production of 500,000 to 600,000 tons of GRS (Government rubber styrene) tread stock "cold rubber" is made with the peroxide initiators described in the Department patents.

9. New vegetable oils of industrial interest discovered. Co-operative research between the Department and the agricultural experiment stations on the chemical screening of new plants has resulted in the discovery of seeds containing oils of unusual composition. Of a total of 1,037 seed samples analyzed, representing 655 plant species, 151 contain unusual types of oil. Four different classes of these new oils with properties different from those now produced domestically offer promise for industrial applications not competitive with presently produced domestic oils. These four classes of oils are undergoing developmental studies. Seeds from which these oils were obtained are produced by hardy plants that can quite likely be developed into commercial crops.
10. Factors controlling juiciness of meat elucidated. Juiciness is one of the most important factors affecting the quality of meat, and retention of juiciness in processed meat is of primary importance. Research conducted on the comparative composition of a number of different beef muscles has shown that increased zinc or sodium content improves juice retention, while increased amounts of calcium, magnesium and hydrogen ions tend to reduce juice retention. It was found further that variation in juice retention in beef muscle varied inversely with the original carbohydrate reserve of the muscle tissue. This fundamental information is essential in devising better methods of utilizing carcasses for meat processing and improvement of processing techniques generally.
11. Industrial uses of animal fats expanded. As a result of the Department's research, epoxidized fats and oils have been finding a growing outlet as stabilizing plasticizers for use in vinyl plastics. These products are now being manufactured at a rate requiring about 40 million pounds of fats per year. Eventual domestic use of as much as 200 million pounds of epoxidized fats annually is forecast by some industrial authorities.

HOME ECONOMICS RESEARCH

Current activities: Investigations are conducted on human nutritional requirements, composition and nutritive value of foods, and problems relating to the household preparation and preservation of foods. Studies are made of problems in household utilization of textiles, clothing, and equipment, and of family requirements for housing and related facilities. Investigations are made also of food consumption practices and the nutritive value and economy of customary diets, patterns of rural family expenditures and production for household use, and economic problems of household management.

Selected Examples of Recent Progress

1. Fatty acid values of food published. Two timely publications on fatty acids in foods have been issued to help advance knowledge of human nutrition. One, "Fatty Acids in Animal and Plant Products - Compilation of Analytical Data and Bibliography" provides technical data on some 20 fatty acids and is for use by research leaders in foods and nutrition. The other, a simplified practical table on "Fatty Acids in Food Fats," gives values for the content of the most abundant fatty acids in common fats and oils, and is for use by nutritionists and others concerned with planning and appraising diets and food supplies. There are many gaps in our information about fats, and these publications should stimulate research to obtain needed new data.

2. Serum cholesterol in animals affected by type of dietary carbohydrates. Three lines of investigations have emphasized the advantages of starch over sugar in food utilization and energy metabolism. In one series, rats on high protein diets had more body protein and less body fat when cornstarch rather than sucrose was the dietary carbohydrate. At 400 days of age serum cholesterol was about twice as high on the diet containing corn oil and sucrose, as on the starch-containing diets. In a second series, rats on diets containing starch rather than sucrose had less liver fat, less cholesterol in liver fat and less kidney damage than those receiving sugars. The highest serum cholesterol appeared in animals receiving their carbohydrate as dextrose. In a third series, pioneering research on cellular metabolism has shown that a protozoan, Tetrahymena pyriformis, which requires many of the same nutrients as mammalian cells, grew and thrived better when the nutrient media contained starch or glycogen rather than sugar. Maximal growth with simple sugars (dextrose or fructose) was about half of that with starch or glycogen, and was intermediate with dextrin or maltose in the media.

3. Amount of linoleic acid in diet found to affect food intake of infants. In contract research at the University of Texas, it was found that as the dietary linoleic acid was decreased from 4 percent to 0.1 percent of the total calories, the infants' demand for food increased from about 85 to 155 calories per kilogram per day. However, their weight gains were similar, indicating greater efficiency in utilization when the diet contained more linoleic acid. Diets of infants appear adequate

in linoleic acid when this substance provides 4 percent of the calories, which is about the amount found in mother's milk.

4. Factors affecting ascorbic acid content of vegetables studied. Some fresh as well as frozen broccoli was found to contain degradation products of ascorbic acid, indicating vitamin losses prior to cooking. During the household cooking the chief factors in losses were long-time cooking (beyond 5-10 minutes boiling or 2 minutes pressure cooking) and leaching into the water during the first five minutes of cooking. Properly cooked, the percentage losses were similar for fresh and frozen broccoli. However, after cooking, the ascorbic acid content was higher in the fresh vegetable than in the frozen, because as received from the market its initial content was usually two to three times higher.
5. Nutritional evaluation of the United States food supply. The nutritive value of the per capita food supply is estimated yearly and compared with earlier years to indicate long-term trends. The latest estimates show that over the past 50 years food energy (calories) are down from 3600 calories per person per day in 1909 to about 3200 in 1958. More protein is being furnished by animal products--two-thirds today compared to one-half in 1909. Supplies of calcium and riboflavin are up mainly because of increased consumption of milk. Supplies of B-vitamins and iron are higher today than in earlier years because of enrichment of cereal products. Ascorbic acid and vitamin A value increased fairly steadily until 1946 but this trend has reversed itself because of the decreases in the consumption of some vegetables and fruits in recent years.
6. Food consumption and dietary levels as related to the age of the homemaker. Peak expenditures for food are made by families in which the homemaker is between 30 and 50 years old; smallest expenditures by households in which the homemaker is 60 years and over. However, on a per person basis, households in which the homemaker is 50-59 years old spend the most, and the households in which the homemaker is under 30 spend the least.

Although the allocation of the average food dollar to any one of the major food groups differs at most by only .2 or 3 cents, age differences do appear in the selection of individual foods within the broad categories. Younger households are more likely to select such items as luncheon meats, canned vegetables, soups, mixtures, fresh fluid and processed milk, soft drinks, chocolate, and cocoa; the older groups are apt to have more of most types of meat, poultry, cheese, butter, coffee, tea, sugar, and fresh fruits and vegetables.

In households with homemakers 60 and over, a somewhat greater proportion than those in younger groups have diets that fail to meet the recommendations of the National Research Council in nutrients. For example, the data from a recent Household Food Consumption Survey shows that 13 percent of households with homemaker 60 years and over failed to meet the recommended allowances for protein compared with 5 to 8 percent in the younger groups; 27 percent failed to meet the riboflavin allowance compared to 14 to 20 percent in the other groups; and 29 percent had less than recommended amounts of ascorbic acid as compared to 24 percent in the other groups.

7. Guides to better nutrition. Research findings have important applications to problems of health and well-being. Current knowledge of nutritional requirements and how they may be met by foods have been translated into guides to help people choose and use foods wisely. For example, popular adaptations of the Department's food budgets have been made for different types of families, such as the family with young children, the family with school children, and the family of older persons. Because studies show that many persons have nutritionally poor breakfasts, the leaflet "Eat a good breakfast to start a good day" was revised also to include current knowledge.

To achieve a better-fed population emphasis is being given to nutrition education and ways of making it more effective. This calls for better informed leaders, as well as sound educational materials. Hence this year's four issues of Nutrition Committee News were planned to stimulate nutrition education activities, and to suggest sources of information and teaching materials.

9. Energy-saving kitchen designs developed. Three kitchen designs based wholly on investigations of space requirements and energy expenditures for household tasks have now been developed. These kitchen plans show great promise for normal homemakers as well as for women who must conserve energy. They are both energy saving and time saving. The designs for the kitchen work areas and storage facilities make use of research findings on energy expenditures for housework as related to household equipment and to work procedures. The first of these kitchens-- a kitchen workroom--has been on display at the Agricultural Research Center for the last three years and has been visited by over 13,000 persons. The second--a kitchen family room--was placed on display during the summer of 1959. The third--a smaller kitchen--providing only for food activities and eating--has only recently been developed.
10. Relative performance of laundering agents in actual use studied. In seeking a basis for predicting effectiveness of detergents and bleaches for home laundering of fabrics, unsoiled swatches of bleached cotton sheeting washed in a small experimental washer (launder-ometer) were compared with naturally-soiled pillow cases washed in household equipment. The same relative effectiveness of detergents and bleaches on fabrics was observed when washed in the

laboratory-type as compared to the household type equipment. However, such evaluations did not predict the specific degree of whiteness to be expected in home laundering of naturally soiled fabrics. Tests showed that both unsoiled and naturally soiled fabrics dried outdoors suffered greater damage than those dried by other methods. Wear accounted for about 50 percent of the total chemical change.

ADMINISTRATION OF PAYMENTS TO STATES, AND RESEARCH IN ALASKA,
PUERTO RICO, AND VIRGIN ISLANDS

Current activities: For work to be done under Federal grant funds, new and revised research proposals from the State agricultural experiment stations are evaluated and approved; annual programs and budget allotments are reviewed and approved; work and expenditures of each experiment station are examined in the field; and assistance is given to States in organizing, planning and coordinating their research.

The Department operates agricultural experiment stations in Puerto Rico, the Virgin Islands, and Alaska. In Puerto Rico research is conducted primarily on tropical and subtropical crops of economic importance to the continental United States, including food, forage, and specialty crops. In the Virgin Islands research and extension work is conducted in the fields of soil and water conservation, improvement of crop plants for commercial and home use, animal husbandry, and development of better rural living conditions. Research in Alaska, carried on as a joint program of the Department and University of Alaska, includes soil analysis, horticultural studies, animal husbandry, agricultural economics, agricultural engineering, insect and plant disease control, and field crop improvement studies.

Selected Examples of Recent Progress

1. Income, investments and costs analyzed for farms in Alaska. Records from 26 cooperating farms analyzed in cooperation with the Alaska Department of Agriculture, show that during 1958 a minimum unit to return a yearly net income of at least \$5,000 requires: for poultry, a flock of 2,000 chickens or production of 40,000 dozen eggs; for dairying, a herd of 18 to 20 milk cows producing 200,000 pounds of milk; for potatoes, 20 planted acres yielding 200 tons; for grain, 200 planted acres yielding 220 tons. Investment and operating costs are 150 to 200 percent of comparable units in the 48 mainland States.
2. Breeding *Tephrosia vogelii* in Puerto Rico advanced. Sixteen different introductions of this plant, a promising source of safer insecticides, were analyzed. Rotenoid content varied from 0 to 2.9 percent on a dry-weight basis. The higher yielding strains meet the requirement that rotenoid content should be at least 1.0 percent for the strain to be commercially feasible. Basic research in chemistry has provided improved methods for the determination of the desired toxic substances and their characteristics in the strains of *Tephrosia*.

3. Potential of woody plants for feed and forage for livestock in Virgin Islands established. Climatic and economic limitations on feed and forage in the Virgin Islands direct attention to the use of established woody plants that will thrive under the Islands' adverse conditions of deficient rainfall and sparse supply of potable water. In a 5-year test of such plants, it has been established that Tan-Tan (Leucaena glauca) is superior in protein produced per acre, longevity of the stand, and ease of harvesting. However, it was found that four other leguminous plants -- Flamboyant, Thibet, Gliricidia, and Pigeon peas -- although less desirable than Tan-Tan will yield from 5 to 7 tons of dry matter per acre per year under proper management.

PLANT DISEASE AND PEST CONTROL

Current Activities: The work covers (a) insect and plant disease control, designed to protect agriculture from destructive insects, nematodes, and plant diseases, including inspection to detect and appraise infestations, certification of regulated articles, supervision of treatments required by plant quarantines, application of pesticides, and use of other methods of combating infestations; (b) protective measures, primarily inspections at ports of entry to prevent the introduction from abroad of insect pests, nematodes, and plant diseases, and certification of the absence of plant pests on plants and plant products for export; and (c) administration and enforcement of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, to prevent the sale of mislabeled and inadequately labeled economic poisons, and to safeguard farmers and other users from injury to crops, livestock, or themselves, and from loss resulting from deceptive, careless, or fraudulent marketing practices.

Selected Examples of Recent Progress:

Plant Pest Control:

1. Barberry eradication. Over 3 1/3 million barberry bushes were destroyed during the year ended June 30, 1959. They were found on 2,801 properties distributed over some 7,532 square miles in 19 states. Of this area 5,862 square miles were placed on maintenance and will require only sufficient work on infested sites to maintain the barberry-free condition. The area requiring further eradication work is now reduced to approximately 49,752 square miles. (See Figure 7).

Following inspection under the provisions of Federal Quarantine No. 38, certificates of inspection permitting interstate shipment of barberry and mahonia plants were issued to 407 nurseries and 71 dealers.

2. Survey and Detection Operations. An intensified nationwide plant pest detection program was launched during the year to provide for prompt discovery of insect pests not known to occur in the United States but which exist in large numbers in foreign countries and are capable of causing serious crop losses in this country. Major emphasis is directed at introduced pests now limited to specific areas, but which may spread to other parts of the country. Interested state and Federal agencies concerned with agriculture, public health and national defense are lending their support. Early detection can lead directly to complete eradication at a comparatively low cost as in the recent case of the Mediterranean fruit fly.

In cooperation with agricultural agencies in all the states, the Cooperative Economic Insect Report is published and mailed weekly to approximately 3,000 interested workers in agriculture and related industries. Special survey reports on the status of major insect pests (such as grasshoppers, fire ants, European corn borers, and those on cotton) are widely used by growers and industry.

3. European chafer control. Acreage infested with the European chafer increased during the year by 54,960 to a total of 697,084 acres. An important infestation was reported in Brooklyn, New York, in March 1959. Followup surveys showed the pest established on more than 8,800 acres in an area of 14 square miles in Kings County. The chafer was also collected on Staten Island, Bedloe's Island, and Governors Island. These finds constitute the only major extension of the known infested area. New York State has extended its quarantine to include most of this area. Controls to prevent spread were applied to 63 acres along parkways in Kings County. Chafers were found in Connecticut where infestations had previously existed. One specimen was trapped in West Virginia. Figure 8 shows the areas of known infestation.

Field studies were continued to determine the value of the blacklight trap as a tool for adult chafer surveys. This development would overcome a difficult problem in the chafer program. The trap will be widely used in the 1960 surveys.

Chemical controls were applied to 628 acres of isolated infestations. Products valued at more than \$28 million were certified for movements from regulated areas.

4. Fruit insect control and eradication programs.

- a. No citrus blackfly infestations have been found in southern Texas since the summer of 1956, although intensive surveys have been conducted annually. Cooperative surveys in fiscal year 1959 in the Republic of Mexico failed to reveal any blackflies in Baja California, south of the California border. Surveys from Sonora east through Tamaulipas included examination of 1,413,172 trees on 26,985 properties and revealed 270 infested properties with 1,554 trees. (See Figure 9). An important phase of the cooperative program is the prompt eradication of infestations in the buffer zone in northeast Mexico. To accomplish this the Mexican Department of Agriculture applied chemicals one or more times to a total of 153,741 trees in the buffer zone. Most infestations were light. No infestations were

BARBERRY ERADICATION

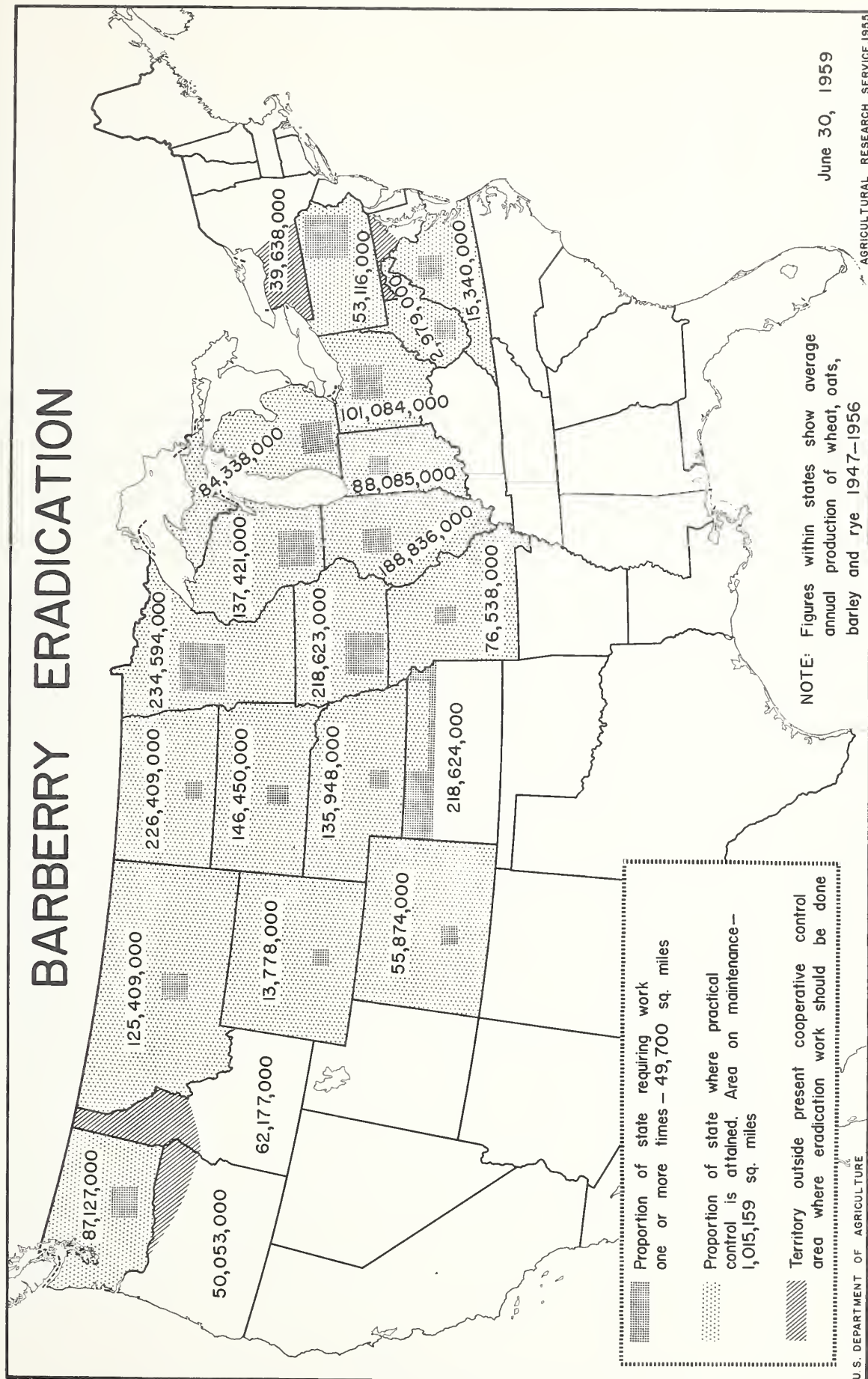


FIGURE 7

EUROPEAN CHAFER CONTROL

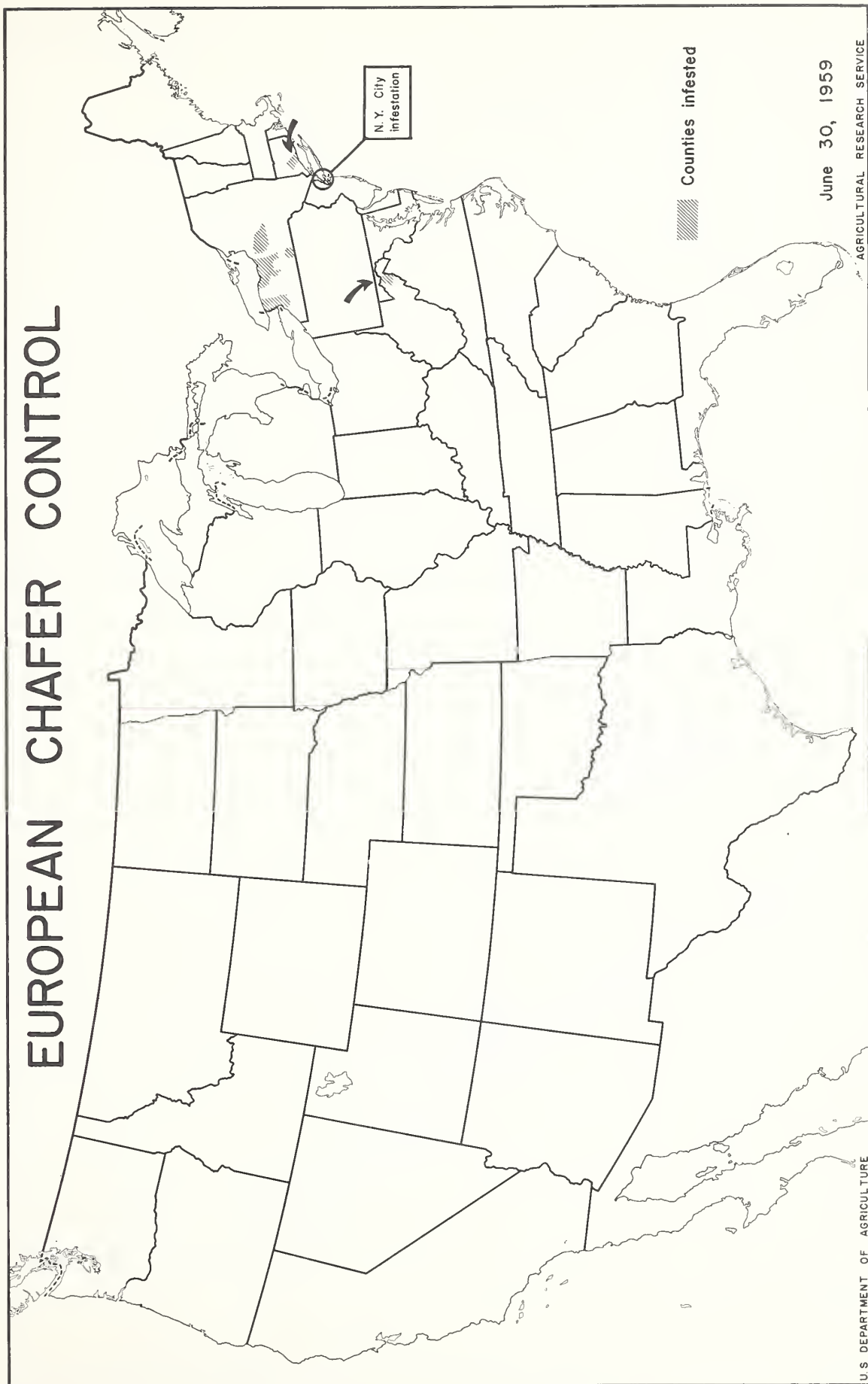
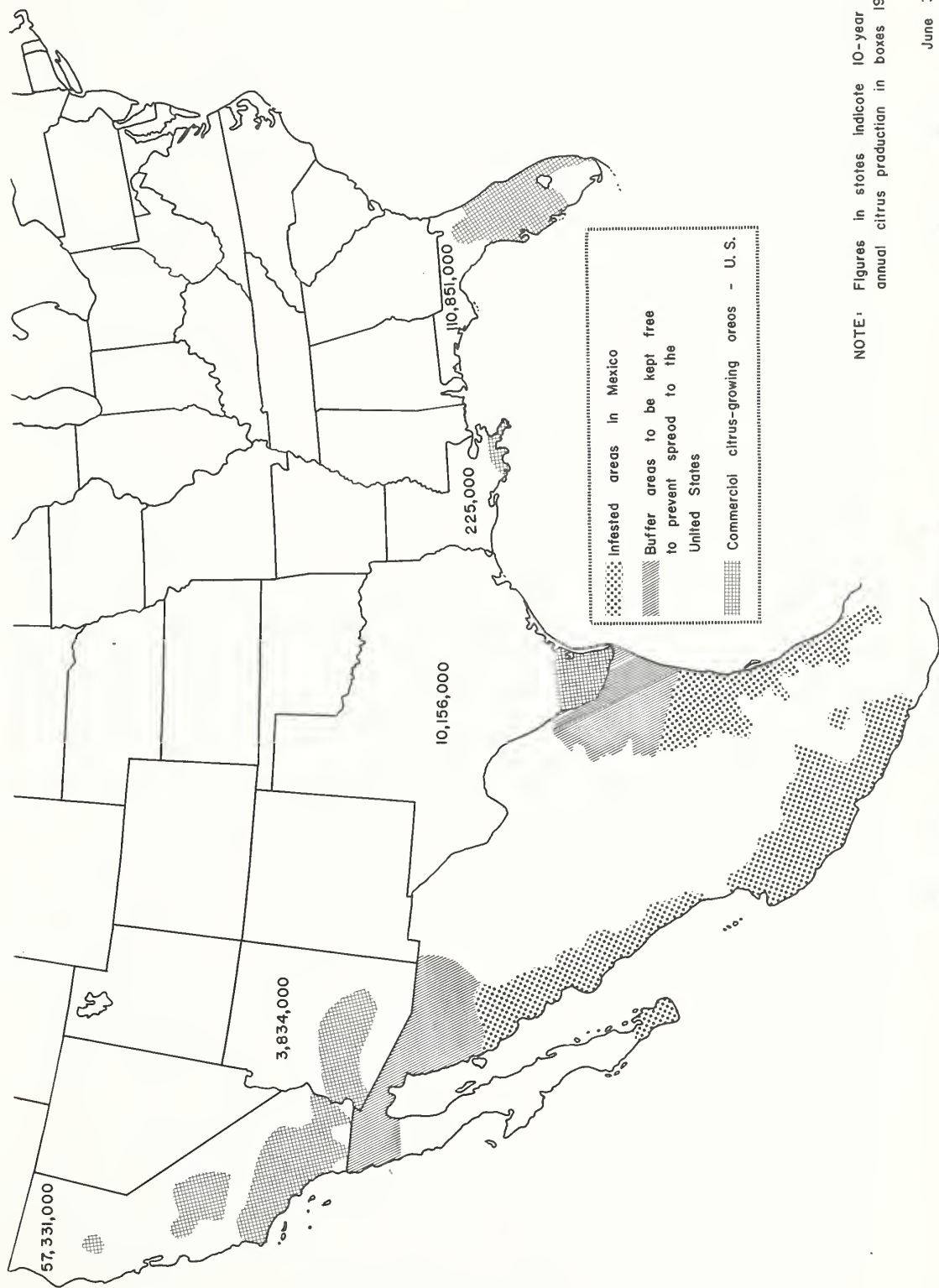


FIGURE 8

CITRUS BLACKFLY CONTROL



NOTE: Figures in states indicate 10-year average annual citrus production in boxes 1947-1956

June 30, 1959

FIGURE 9

closer than 60 miles to the United States border. The continued effectiveness of parasites was noted throughout the areas of general infestation where parasite control is practiced.

- b. No Hall scale was found in inspections throughout the California area in 1959. The last infestation was found in June 1956. If no live insects are found during the next 12 months, it would appear that eradication has been accomplished.
- c. Large-scale surveys to detect possible reintroduction of the Mediterranean fruit fly following the successful eradication in 1957 and 1958 fiscal years, were conducted during the 1959 fiscal year. Trapping was conducted throughout Florida and other Southern States. Approximately 8,000 traps are in operation in susceptible host crop areas. Combinations of baits are now employed in order to assure detection of other fruit flies of economic importance. Several hundred traps were operated in the southern parts of Alabama, Georgia, Louisiana, Mississippi, and Texas. The trapping program will be continued during fiscal year 1960.
- d. The Mexican fruit fly eradication program along the international boundary between California and Baja California and Arizona and Sonora was continued throughout 1959. As a result one adult fly was captured at Tijuana, Baja California on May 11, 1959, the first taken since October 20, 1957. Controls were applied immediately. The last fly caught in California was early in July 1957. California and Mexico applied sprays to more than 440,000 plants in the protective area. Infestations were low in Texas. The first catch in that State was recorded in November 1958. Only twenty infestations were recorded during the trapping season. (See Figure 10).

5. Grasshopper and Mormon Cricket Control.

- a. Grasshopper infestations were at low level in 1959. The 1958 cooperative control program in 11 Western States played an important part in reducing the threat of a serious outbreak of grasshoppers. Nymphal surveys completed in the spring of 1959 verified the effectiveness of the 1958 control effort which included the treating of nearly 5 million acres.

Only 600,000 acres in 7 states required Federal-state attention in 1959. Because of weather unfavorable for grasshopper development in Colorado, Kansas, Nebraska, and Texas, where programs had been planned to control small infestations not included in the 1958

program, no further work was needed. The largest acreage treated was in New Mexico with 275,346 acres, Wyoming with approximately 225,000 acres, and Idaho with 64,734. Smaller acreages were treated in Montana, North Dakota, South Dakota, and Utah.

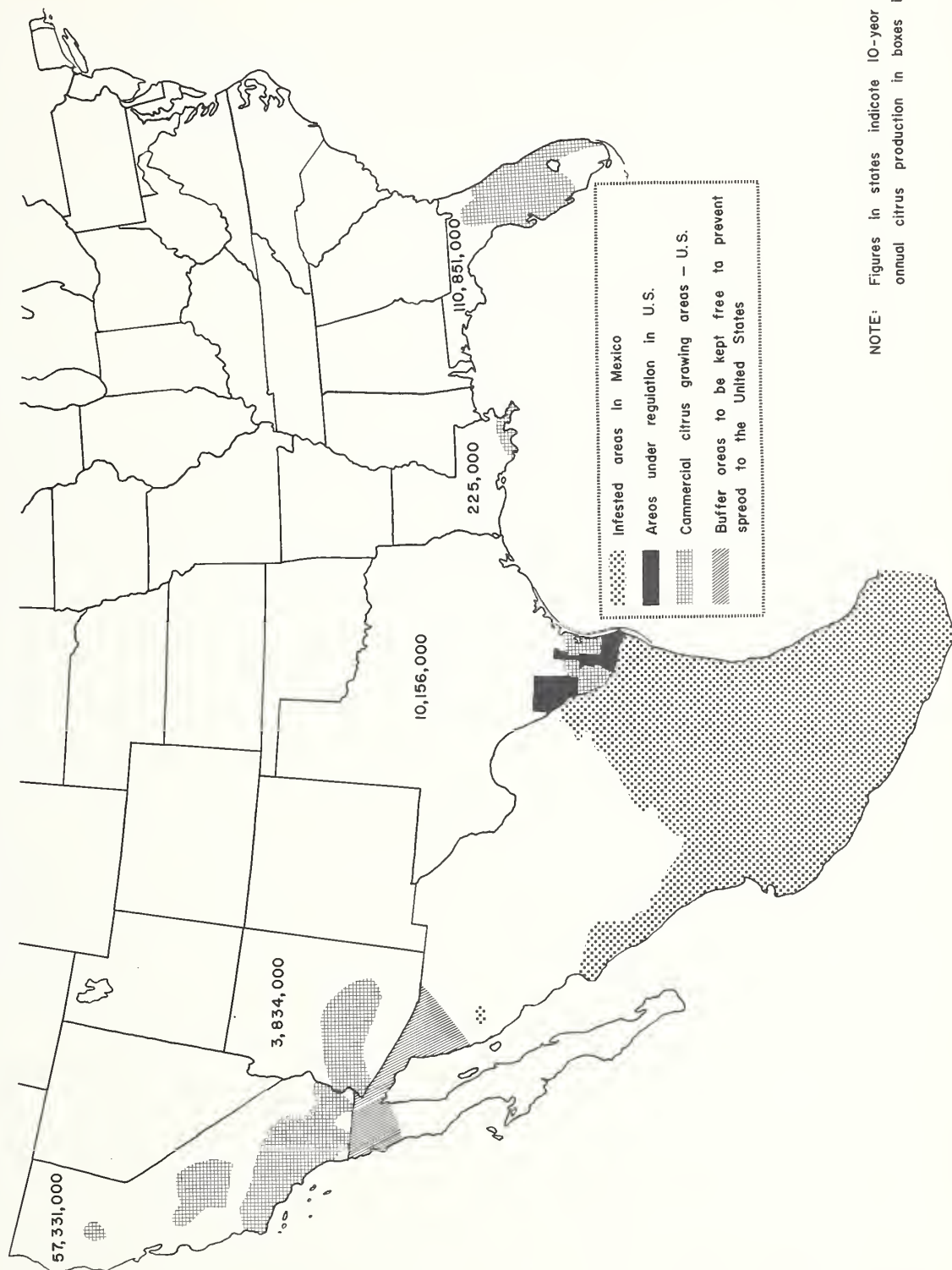
- b. Less control work was required in 1959 for Mormon cricket than in 1958. About 56,000 acres of infested rangeland in 4 states required treatment in 1959, as compared with 74,052 acres treated in 1958. Work completed in 1959 includes 35,074 acres in Idaho, 10,384 acres in Montana, 8,542 acres in Utah, and 2,000 acres in Wyoming.
6. Gypsy Moth Eradication. Sevin, a new insecticide with low toxicity to warmblooded animals, fish, and aquatic insects, was selected for use in the 1959 New York gypsy moth program. The Department and New York State agriculture and conservation agencies chose Sevin from 36 insecticides tested for effectiveness against the gypsy moth. During late May and early June, 85,560 acres in Otsego and Delaware Counties were treated using $1\frac{1}{4}$ pounds of the new insecticide per acre. In addition to timbered lands, the treated area included infested farm wood lots, and hedge-rows. Subsequent appraisal surveys in the area showed no gypsy moth larvae, but this new material is costly, difficult to formulate, and will need further study.

Aerial application of DDT was made on 13,949 acres in the Lansing, Michigan area in May 1959. This area involved the only known gypsy moth infestation outside of the northeast. In the northeast, 7 states applied suppression treatments to 46,293 acres. The gypsy moth trapping program, so vital to the eradication effort, has continued on a comprehensive scale. The trapping program has been assured an ample supply of attractant from collections in foreign countries during the past two years. (See Figure 11).

7. Hoja Blanca Disease of Rice. To protect the nation's \$200,000,000 annual rice crop, cooperative Federal-state efforts are aimed toward eradication of this destructive disease before it becomes widespread in rice-growing areas. Eradication measures applied on the initial infection centers near Belle Glade, Florida and Bay St. Louis, Miss. included destruction of volunteer rice in adjoining fields and application of insecticidal sprays to their environs to eliminate the leafhopper vectors. No rice was planted in these areas in 1959.

Throughout the year, intensive vector and disease surveys were conducted in cooperation with all the principal rice-growing states. By late 1959, the vector and/or the disease had been found on approximately 8,000 acres in Louisiana. The entire area concerned has been under continuous insecticide treatment.

MEXICAN FRUIT FLY CONTROL



NOTE: Figures in states indicate 10-year average annual citrus production in boxes 1947-1956

June 30, 1959

FIGURE 10

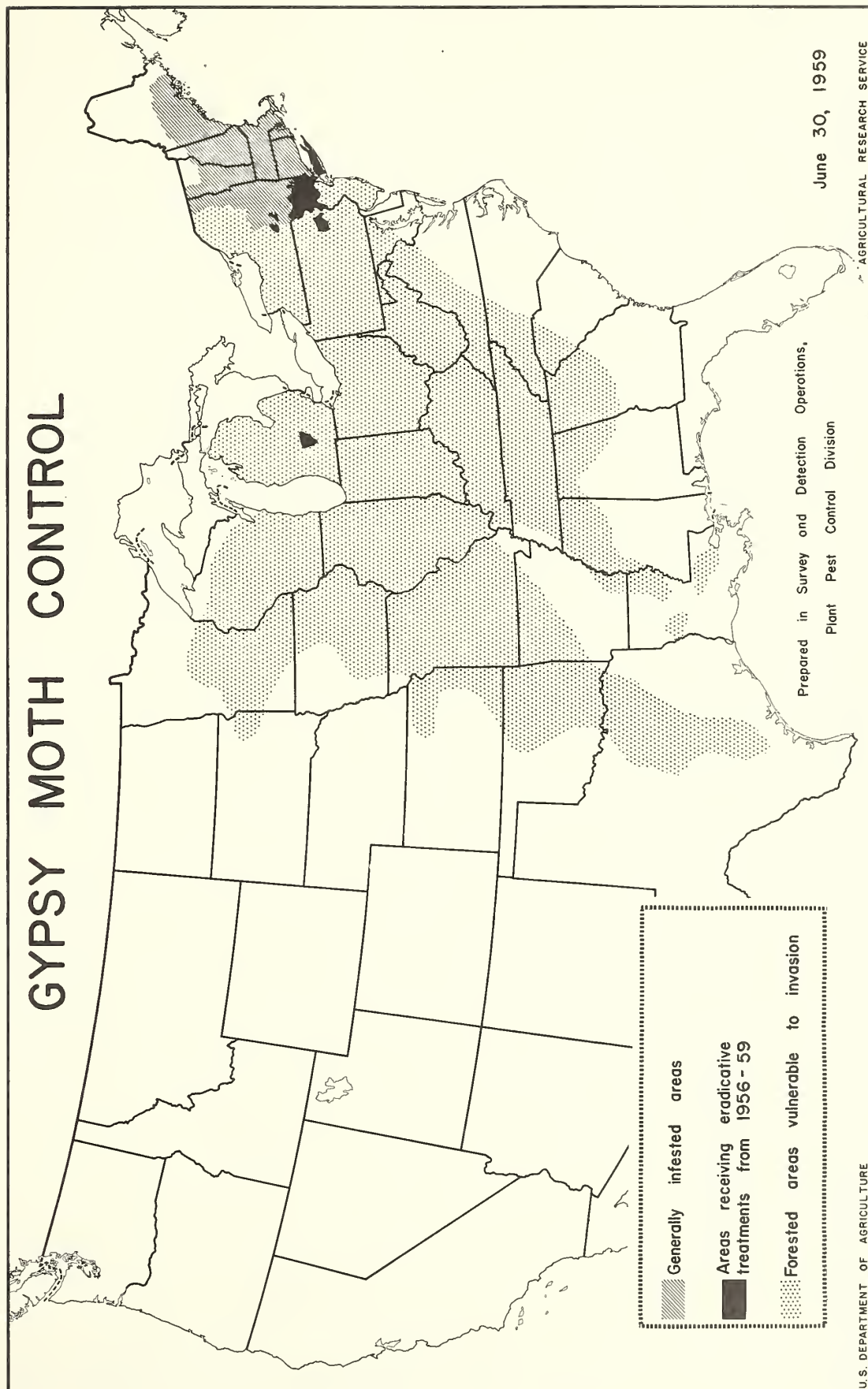


FIGURE 11

With full cooperation from the affected states, the Department joined in control efforts to prevent further spread of the vector from the known infected areas. With funds released from the Contingency Fund, cooperative eradication measures including timely application of insecticides are continuing, and further surveys are underway to detect as soon as possible any new infection centers that may exist.

8. Imported Fire Ant. Acreage treated for fire ant was substantially increased during 1959. A total of 1,470,012 acres was treated in the 9 infested states as of September 30. Acreages treated by States were as follows: Alabama, 419,519; Arkansas, 43,264; Florida, 206,796; Georgia, 280,482; Louisiana, 388,649; Mississippi, 69,686; North Carolina, 2,116; South Carolina, 10,136; Texas, 49,364. (See Figure 12).

Improvements in the granular insecticide used to treat fire ant-infested areas permitted a substantial reduction in the rate of application per acre. Now $1\frac{1}{4}$ pounds per acre of the approved insecticides will achieve eradication, whereas it formerly required 2 pounds per acre. Thus, a greater acreage can be treated at no additional cost.

9. Federal Insecticide, Fungicide, and Rodenticide Act.

- a. Registration activities highest in decade. In fiscal year 1959, registrations under the Act hit the highest peak since 1949, the second year after registration became mandatory under the law as amended in 1947. During the year, 4,876 new products, 4,237 amended labels, and 2,856 distributor's brands, or a total of 11,969 were registered. During the year, 2,545 registrations were cancelled; the majority of these were registered in fiscal years 1949 and 1954.
- b. Enforcement work steady. A total of 1,310 samples of economic poisons shipped in interstate commerce were collected for analysis and testing during the year. Of these, 218 were serious violations requiring 193 notices of violation and 25 seizures; and 121 were minor violations corrected by correspondence. A total of 283 products offered for import were reviewed, and 9 were held until brought into compliance with the Act.
- c. Pesticide chemicals amendment (P.L. 518) During the year, 26 petitions for tolerances or exemptions were processed and certifications of usefulness and opinions on residue transmitted to the Food and Drug Administration. A total of 2,070 pesticide chemical uses registered under the Federal Insecticide, Fungicide, and Rodenticide Act are now covered by tolerances or exemptions. As has been true every year since 1954 when P. L. 518 was

passed, many additional uses of new chemicals on food crops were accepted upon submission of evidence that they would leave no harmful residues if used as directed. This represents appreciable progress in making legally available an adequate number of chemicals for use on food or feed crops.

- d. Federal Insecticide, Fungicide, and Rodenticide Act Amended (P. L. 86-139). On August 7, 1959, an amendment to the Act brought under its provisions, and those of P. L. 518, nematocides, desiccants, defoliants and plant regulators which have found wide commercial application since the original legislation in 1947. While the amended law does not become fully effective with respect to all products within these classes of chemicals until March 1960 and may be extended for an additional year, it is expected that most manufacturers and formulators will begin immediate steps to have such products brought into conformity with the amended Act.
10. Japanese Beetle Control. Reports indicated that Japanese beetle adult populations were generally much heavier during 1959 than in 1958, especially in the lower Lake States. New infestations were reported outside of the area regulated by the Federal quarantine from Ohio, Illinois, Indiana, Tennessee, Michigan, and Missouri. (See Figure 13).

During the year, soil treatments were applied on 26,831 acres and, in addition, 6,726 acres received suppressive foliage sprays. Major acreages treated by States were as follows: Illinois, 14,136; Tennessee, 2,215; Kentucky, 2,216; Ohio, 2,535; Georgia, 1,180; North Carolina, 3,169. Prior to the 1959 season, all known infestations in Michigan, Iowa, and Tennessee had been treated.

Year-round regulation of soil and plants to prevent spread of the soil-inhabiting forms of the Japanese beetle from quarantined areas to ~~non~~infested areas was checked by means of 23,328 calls to shippers and carriers who moved products valued at more than \$21 million.

Further consideration was given to the use of the milky spore disease for the control of the Japanese beetle especially in outlying areas. Research to find ways to mass-produce spores economically on artificial media has been undertaken by the Northern Utilization Research and Development Division of ARS at Peoria, Illinois. The Entomology Research Division of ARS is supplying strains of the disease organism and conducting spore viability tests. Methods for aerial and ground dispersal of the material are being studied by the Plant Pest Control Division of ARS.

STATUS OF IMPORTED FIRE ANT

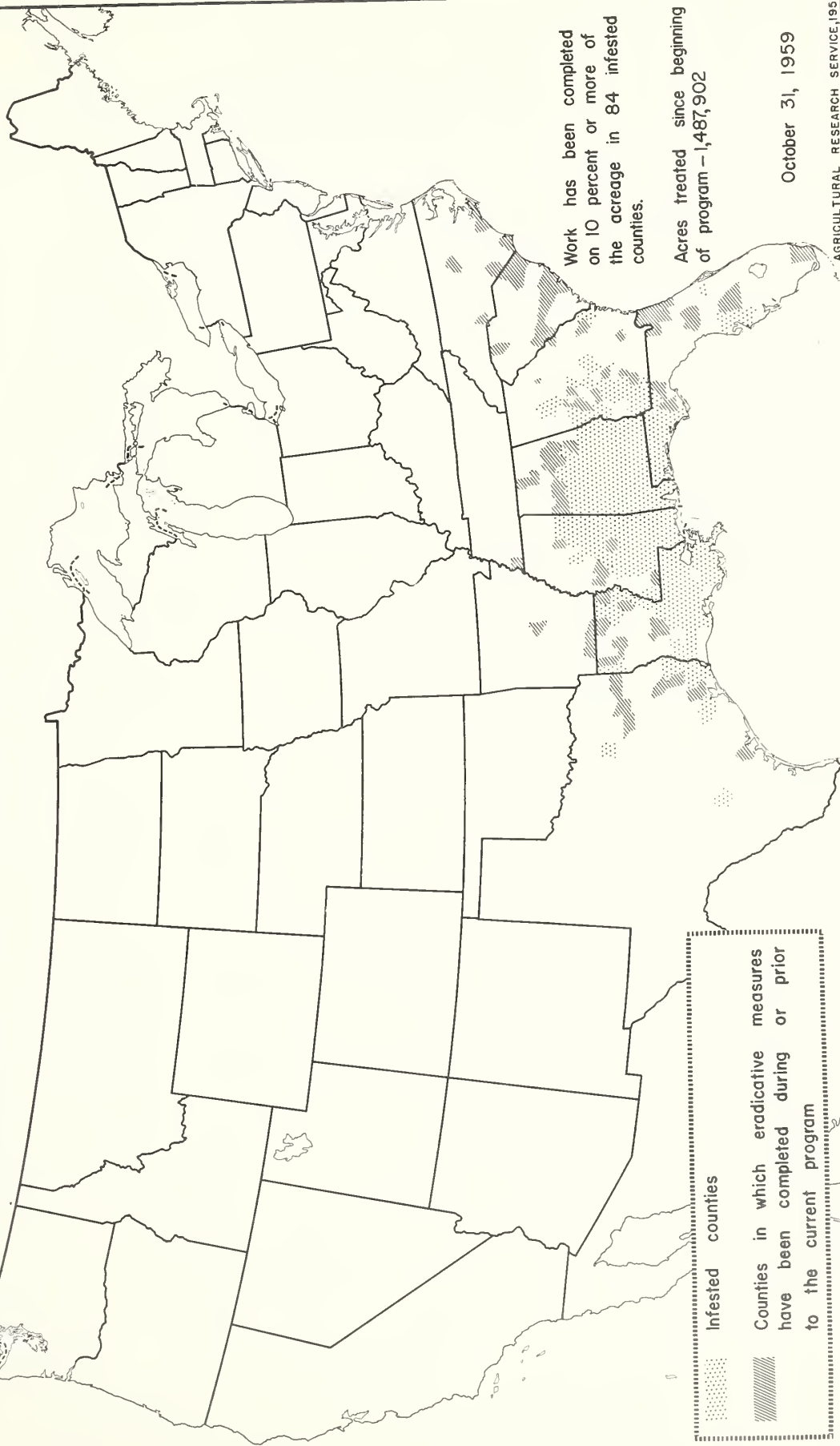


FIGURE 12

JAPANESE BEETLE

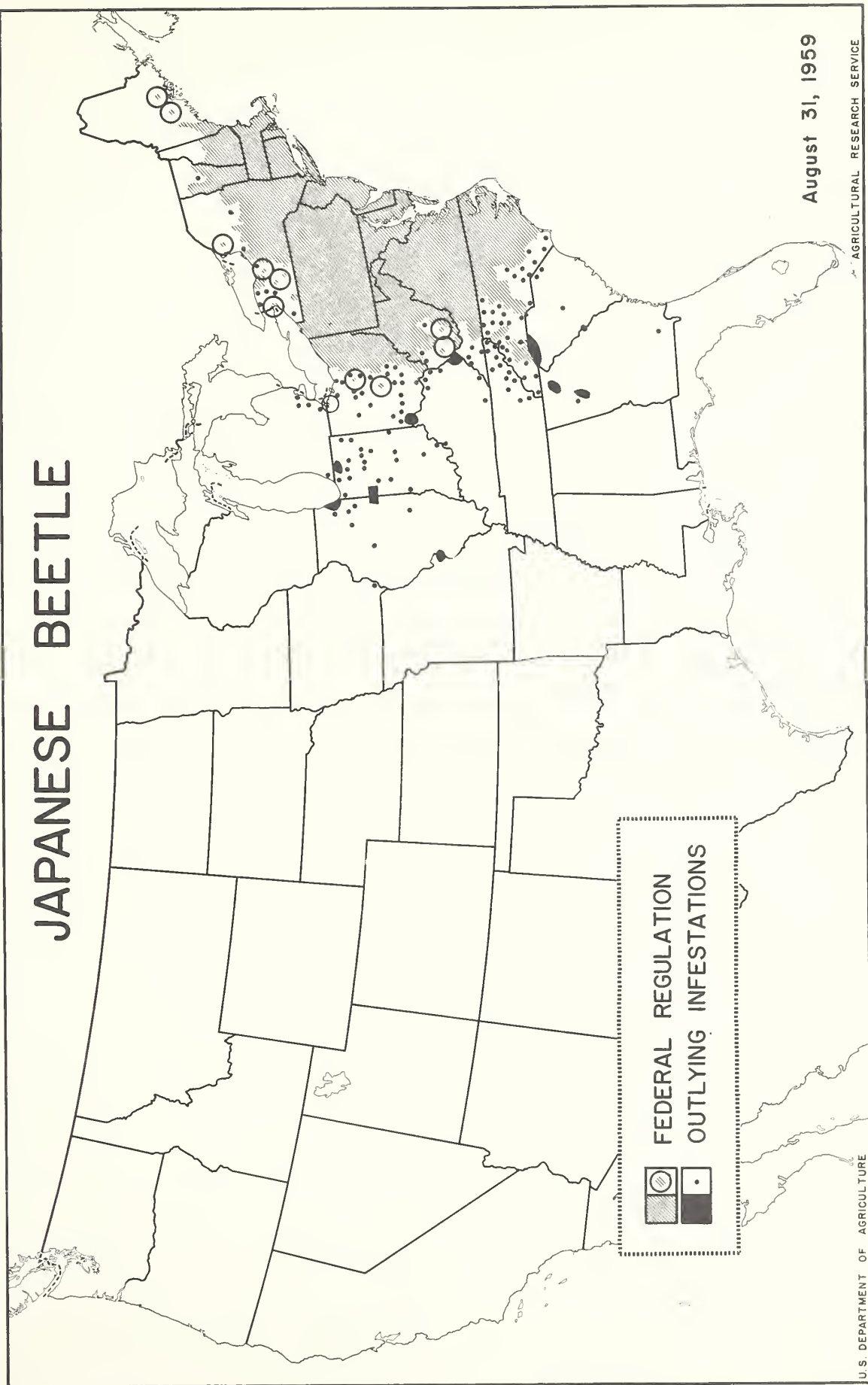


FIGURE 13

11. Khapra Beetle Eradication. The eradication program is keeping pace with new finds. Since the program was undertaken in 1955, 689 properties having a total of 165,684,489 cu. ft. have been found infested. As of Oct. 31, 1959, 683 properties accounting for 164,691,449 cu. ft. of storage space have been fumigated and are free to engage in normal business. A summary of the program by states follows:

Khapra beetle eradication from initiation of the program
in 1955 through October 31, 1959

State	<u>Infested</u>		<u>Treated</u>		<u>Remaining</u>	
	No. Prop.	Cubic Feet	No. Prop.	Cubic Feet	No. Prop.	Cubic Feet
California	335	80,864,004	335	80,864,004	-	-
Arizona	226	56,313,470	220	55,320,430	6	993,040
New Mexico	19	1,778,808	19	1,778,808	-	-
Texas	22	1,850,716	22	1,850,716	-	-
Republic of Mexico	87	24,877,491	87	24,877,491	-	-
Total	689	165,684,489	683	164,691,449	6	993,040

During the year ended June 30, 1959, 12,361 properties were given an initial inspection and 30,995 sites were reinspected in 34 States and Mexico. Of the sites inspected 70 with volume of 16,382,940 cubic feet were found infested. Of this total, Texas, a newly infested State, had 22, California, 5; Arizona, 18; New Mexico, 13; and the Republic of Mexico, 12. Sixty-eight of these properties having a total volume of 15,698,400 cubic feet have now been fumigated and others will receive prompt attention as they are found. (See Figure 14).

12. Nematode Control.

- a. Soybean cyst nematode damage to soybean plantings was widespread and severe in the infested areas in 1959. In Tennessee, approximately 2,000 acres of soybeans were plowed under because fields were considered a total loss. Other areas in Arkansas, Missouri, and North Carolina experienced severe damage which materially reduced yields. In September, the nematode was found in Illinois. (See Figure 15).

Surveys are underway in both infested and noninfested states to determine the extent of known infestations and to locate any existing unknown ones. All infested locations have been placed under rigid Federal and/or state regulation and no agricultural or other commodities are allowed to move unless in accordance with approved procedures.

Research and methods improvement operations are continuing to investigate nematocides which will control or eradicate this pest in the field.

The status of infestations as of September 30, 1959 is as follows:

State	Number of Counties	Number of Properties	Total Infested Acres
Arkansas	3	307	8,070
Illinois	1	1	20
Kentucky	2	15	1,174
Mississippi	1	1	300
Missouri	4	199	7,036
North Carolina	7	160	3,665
Tennessee	8	170	8,960
Virginia	2	60	3,993
Total	28	913	33,218

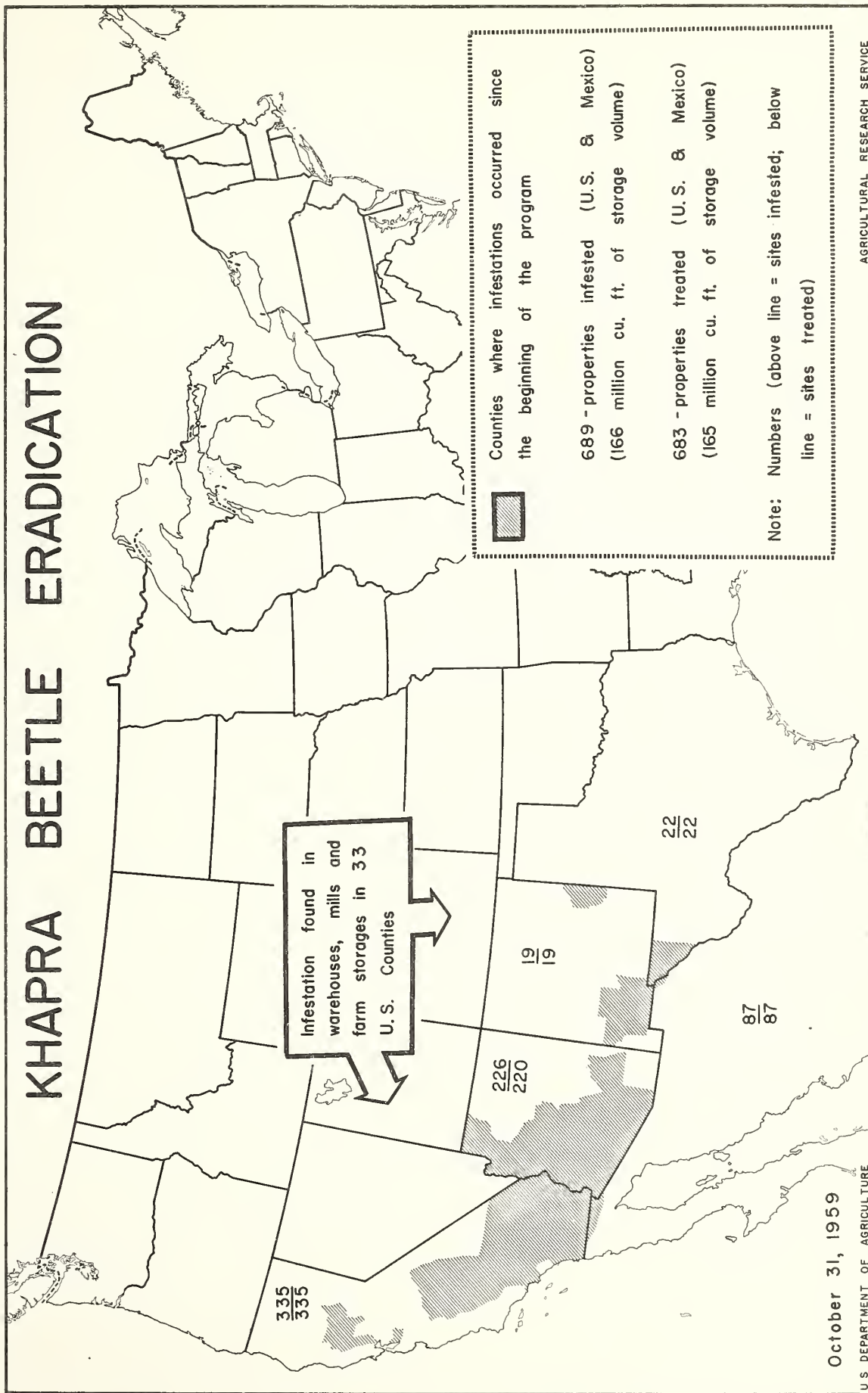
- b. Golden nematode infestations remained at low level. Surveys on Long Island during fiscal year 1959 revealed only 11 new infested properties having a total of 582 acres. Surveys completed during the year in potato growing districts in 21 States failed to disclose infestation. Since the golden nematode was discovered in 1945, a total of 14,233 acres has been found infested on 332 properties on Long Island.

Extensive surveys are being continued in both the infested area and in noninfested potato growing states. Known infested land is not planted to potatoes and potatoes produced in adjoining land in the regulated area as well as other regulated articles are moved under strict regulation.

- c. Burrowing nematode control continued with inspections of 859 groves and 939 greenhouses and nurseries. No infestations were found in 1959 in those counties found to be noninfested in 1958. New properties discovered included 183 citrus groves, 46 citrus nurseries, 24 ornamental nurseries, and 9 miscellaneous properties.

The State of Florida during the year treated 96 nurseries and 85 groves, involving a total of 824 acres. Since the beginning of the program 11,038 acres have been found infested. As of June 30, 1959, 5,008 acres have been treated.

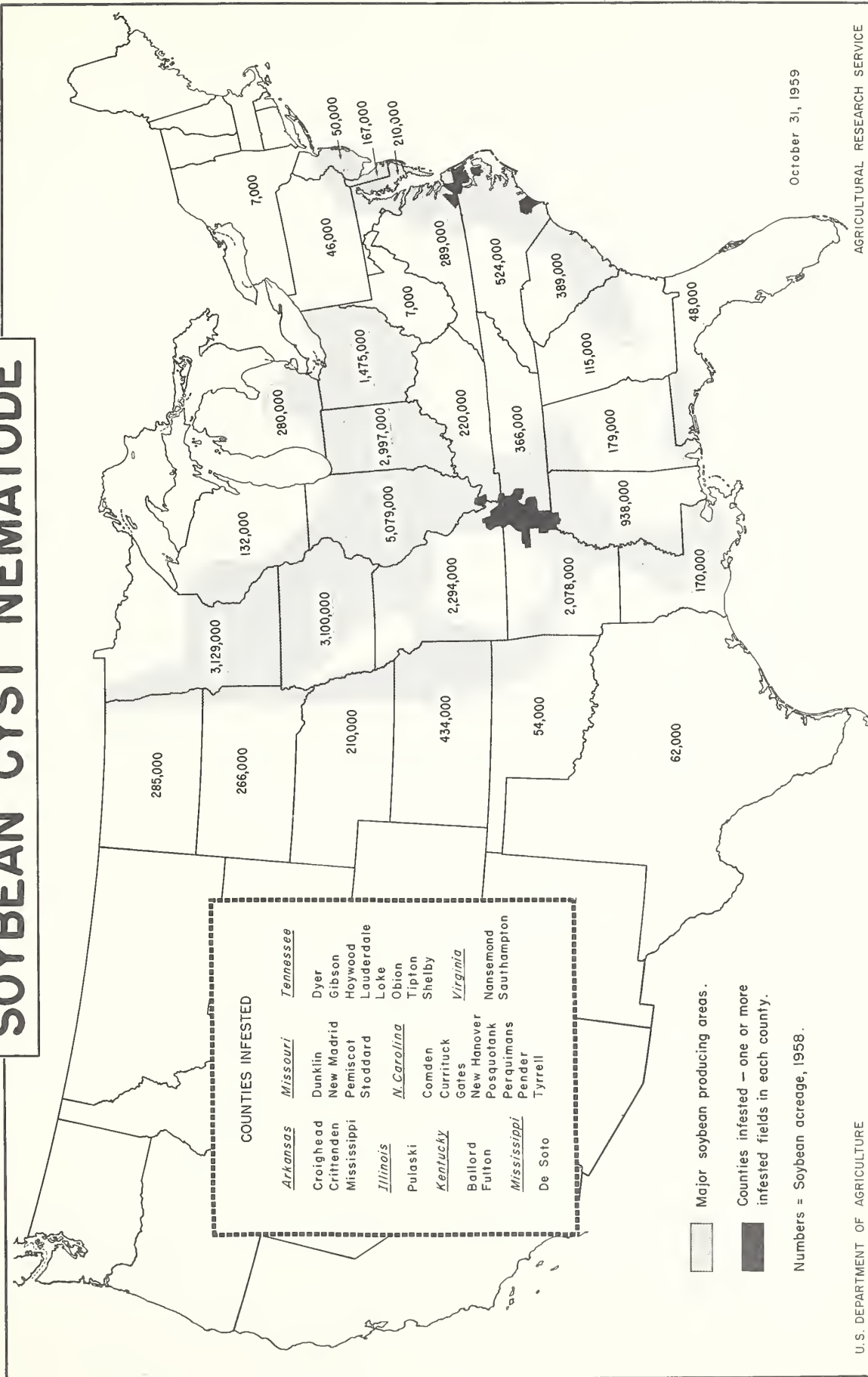
KHAPRA BEETLE ERADICATION



AGRICULTURAL RESEARCH SERVICE

FIGURE 14

SOYBEAN CYST NEMATODE



October 31, 1959

AGRICULTURAL RESEARCH SERVICE

U. S. DEPARTMENT OF AGRICULTURE

FIGURE 15

13. Phony Peach and Peach Mosaic Eradication.

- a. Incidence of phony peach disease showed a further drop during fiscal year 1959. The incidence of phony peach disease was 0.4% as compared with 0.5% in 1958; 0.7% in 1954; 1.3% in 1953; and 2.5% in 1952. A total of 6,297,857 peach trees in seven Southeastern States were inspected in fiscal 1959, of which 26,500 were found to be infected.

All phony peach infected trees were removed by the owners. Removal or destruction of wild plum, a natural reservoir for the virus, has been continued as well as the strict enforcement of quarantine regulations. These measures strongly contribute to the recurring low incidence of this disease.

- b. Incidence of peach mosaic continues at a satisfactory low during 1959. The over-all disease incidence of 0.6% in 1959 compared with 0.1% in 1958; 0.5% in 1957; 0.7% in 1954; 1.3% in 1953; and 2.5% in 1952. Inspection was made of 2,494,646 trees, of which only 1,462 were found infected and were removed.

14. Pink Bollworm Control. Pink bollworm has spread in Arizona, Arkansas, and Louisiana. In Arizona, heavy infestations involve large acreage in Maricopa County, with lesser infestations in Pima and Pinal Counties. As of October 31, 1959, 10 additional counties in Arkansas were found lightly infested, one county as far east as the Mississippi River. Light infestations were recorded in 8 new parishes in Louisiana. (See Figure 16).

In Arkansas and Louisiana control measures included the destruction of all cotton stalks in the regulated areas in accordance with dates established by state authority. In Arizona, growers were required to destroy the stalks on 365,000 acres and to plow under crop residues by a predetermined date to create a long host-free period. Intensive eradication measures were inaugurated in known infested and adjacent fields in Maricopa, Pima, and Pinal Counties during the early development of the 1959 crops. By July, eight applications of DDT had been made to some 75,000 acres known to be infested or directly exposed. Federal, state, and cotton industry funds were used to continue the cooperative eradication program. Intensive inspection of cotton fields, gin trash and lint cleaners was made during the early fall to locate any infestation which may have persisted despite the cultural and chemical program and to detect and treat new infestations occurring outside the known infested area of 1958 season. Five such infestations were detected, and 2 to 5 spray applications were made to 1,431 acres. Sanitary practices are being required in movement of cotton and at gins as a part of the eradication effort. Growers throughout Arizona will be required again this year to maintain a pink bollworm

host-free period by destruction of cotton stalks and plow under of crop residue by a predetermined date and to delay planting of the 1960 cotton crop.

Newly-found infested locations placed under the quarantine regulation consisted of all or parts of 4 counties in Arizona, 5 parishes in Louisiana, and 25 counties in Arkansas.

A marked increase in intensity of infestation was noted in Texas. This is of particular importance since the central Texas area is a source of adult moths for natural spread eastward in wind currents.

To prevent spread, particular attention was directed to the interstate movement of milo feed grain from west Texas to Arizona and California. Trucks and rail cars used for hauling such grain are frequently contaminated with cotton seed from pink bollworm infested areas. Cooperation with carriers, millers, and other shippers has improved necessary sanitary measures in order to eliminate this hazard to western cotton areas.

15. Sweetpotato Weevil Control. No new counties were found infested during the past fiscal year. Over 81,000 inspections were made for the weevil in the Southern States during this period. A total of 2,117 farms was freed of the weevil by cooperative work with growers in the 6 states in which control is in operation.

The sweetpotato crop was protected by the growers in this area through application of insecticide to 2,549 seedbeds and 12,448 acres of plantings, and by the dusting of 1,326,312 bushels of sweetpotatoes before fall storage. Cooperative wild host plant suppression was more successful than in any year since the program began in 1946. (See Figure 17).

16. White-Fringed Beetle Control. More than 117,000 acres received soil treatment during the year compared with 53,000 acres in fiscal year 1958. The increase was made possible in several states through a combination of white-fringed beetle and imported fire ant eradication in areas where the two pests occur together. Progress in the eradication effort is indicated in that twice as many acres were treated for the beetle as were found newly infested during the year. The fiscal year 1960 program calls for the treatment of 126,000 more acres in 51 additional counties of the white-fringed beetle infested area.

White-fringed beetles have been found on 701,811 acres in Alabama, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, and Tennessee. Of the total infested acreage more than 200,000 acres have been treated and considered to be free from infestation. Included in the treatment are all of the infestations in 87 of the 211 infested counties, which includes all of the known infested lands in South Carolina. (See Figure 18).

PINK BOLLWORM CONTROL

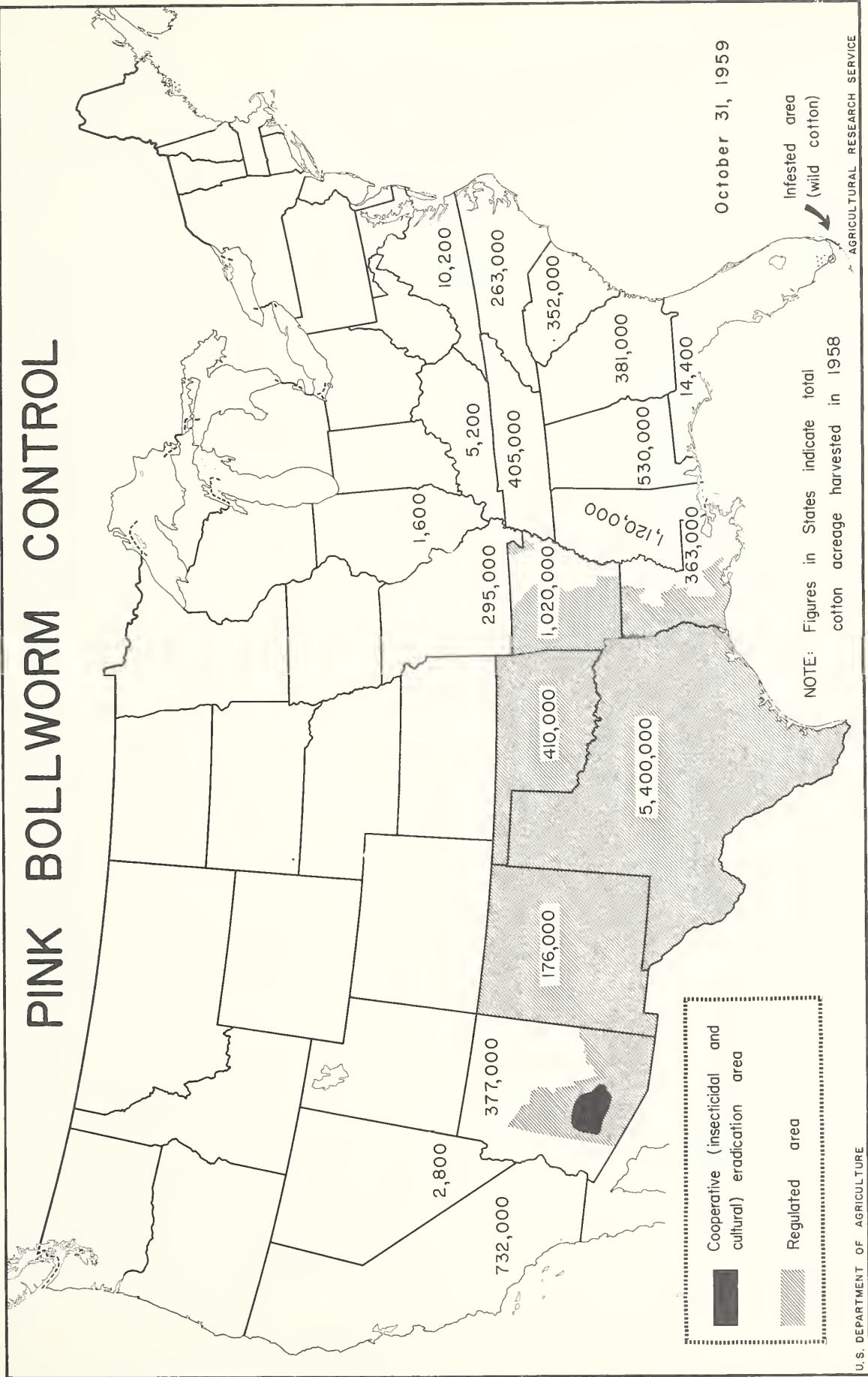
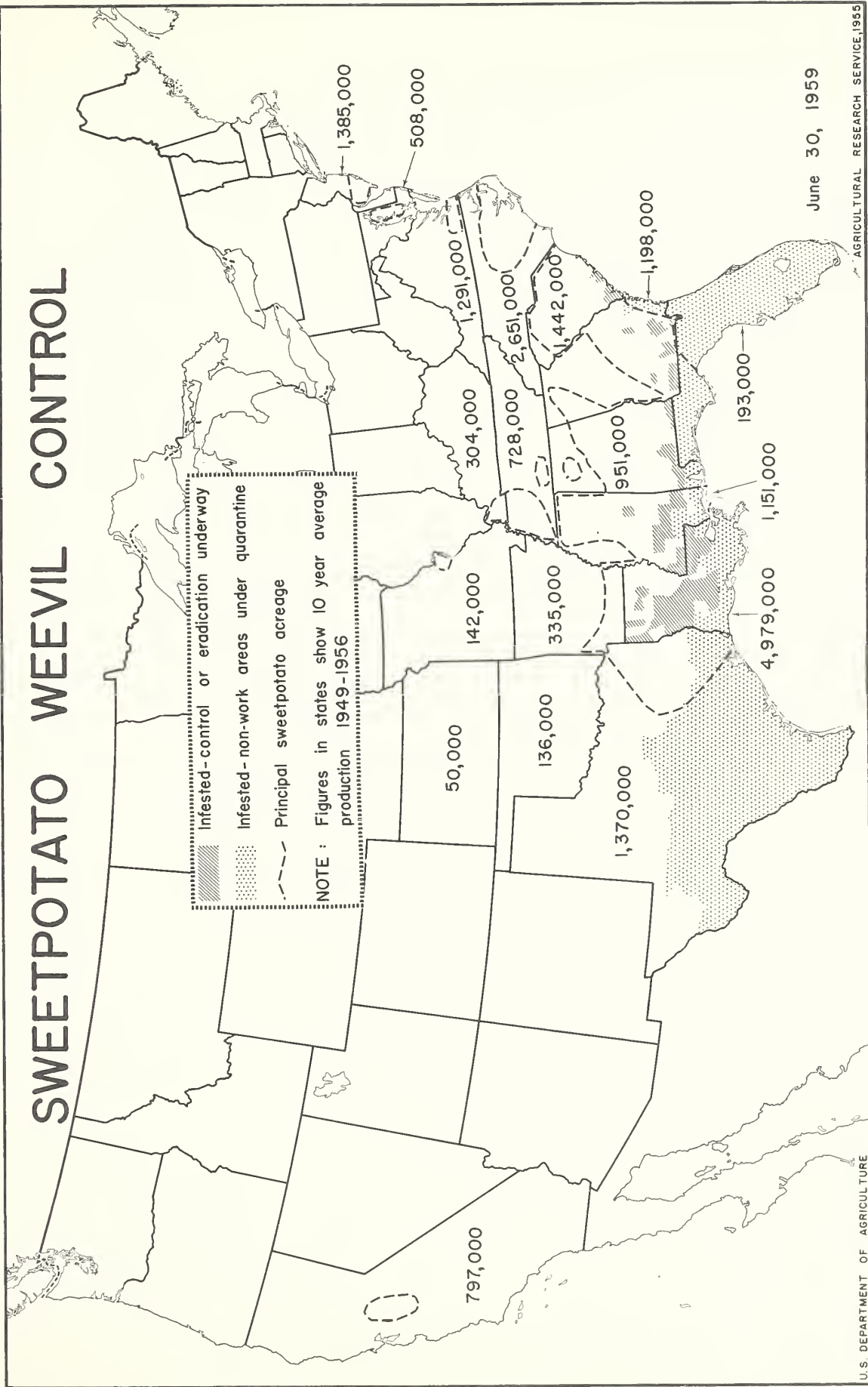


FIGURE 16

SWEETPOTATO WEEVIL CONTROL



June 30, 1959

AGRICULTURAL RESEARCH SERVICE, 1955

U.S. DEPARTMENT OF AGRICULTURE

FIGURE 1.7

WHITE-FRINGED BEETLES

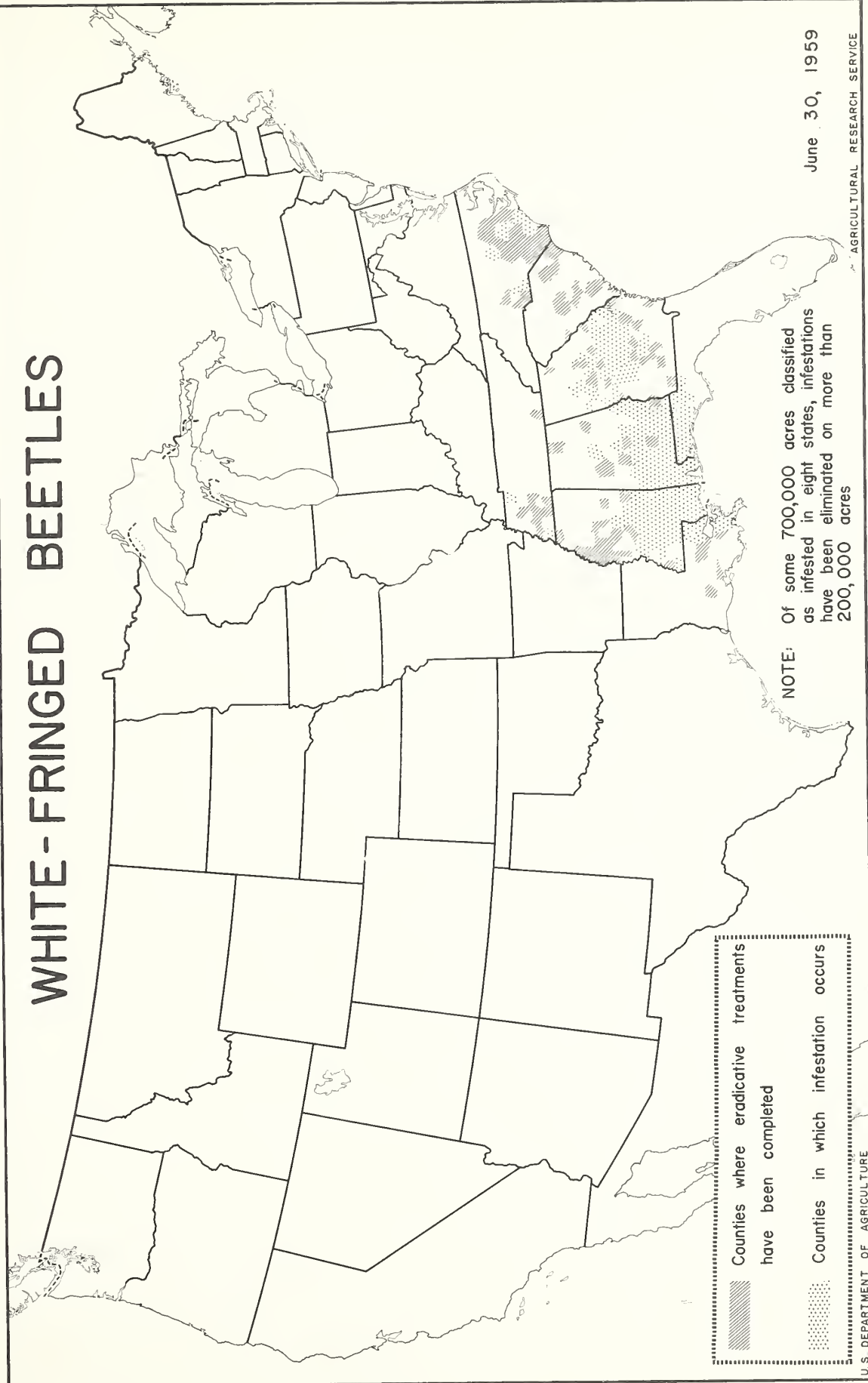


FIGURE 18

The application of insecticides to nurseries, railroad yards, and loading points to reduce or eliminate beetle populations was continued as a safe means of moving products and eliminating the hazard of long-distance spread.

17. Witchweed Eradication. As of June 30, 1959, systematic surveys revealed that witchweed infests all or part of 112,480 acres. This infestation occurs on 4,503 properties involving 75,901 acres in North Carolina, and 1,357 properties having 36,579 acres in South Carolina. Of the total infested acres, 98,826 are cultivated and the remaining 13,654 acres are in pasture or other noncultivated land. (See Figure 19).

Cultural controls and chemicals are being used to eradicate witchweed. As of October 16, 1959 an aggregate of 204,609 acres had been sprayed with a recommended herbicide, in most instances 2,4-D. Cultural control practices have been carried out on 15,887 acres involving 1,246 properties in the two-state area. Surveys for three successive years reveal identical infestation pattern and although four new counties were added in 1959 the area remains essentially the same.

A methods improvement laboratory was established at Whiteville, North Carolina, to find more effective ways of dealing with this problem. There are indications that certain preplanting herbicides can be used successfully.

During the year considerable refinement was made in the descriptions of infested sites. All areas were redescribed into smaller units or as individual properties. This has permitted closer regulation of the local movement of farm products and machinery and offers needed protection to locations where eradication measures are being applied.

18. Contingency Fund. Table II shows the releases from the contingency fund for fiscal year 1954 through November 1959.

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE

Releases from the Contingency Fund for Control of Emergency Outbreaks of
Insects and Plant Diseases, Fiscal Years 1954 through 1960 (11/30/59).

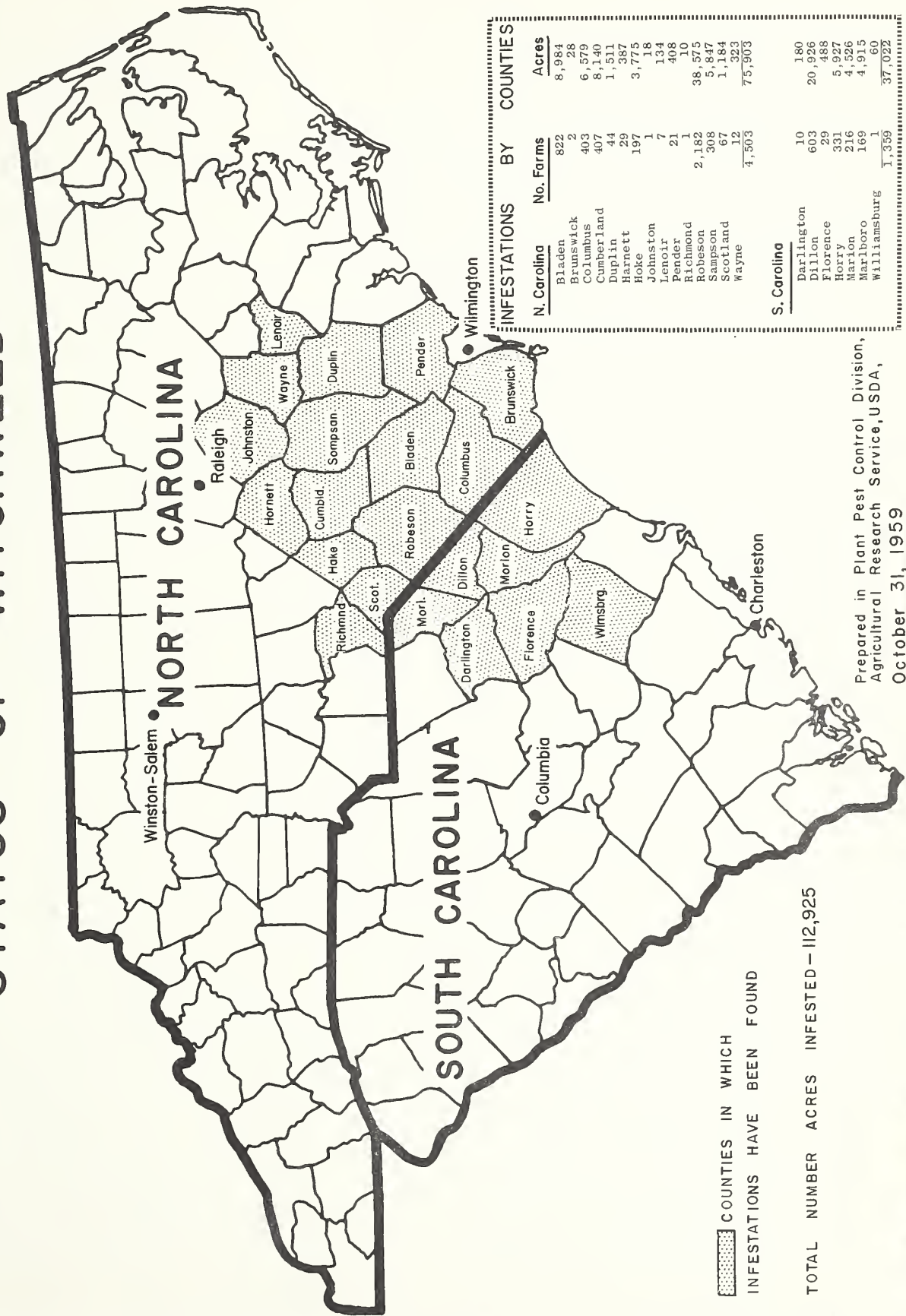
	1954	1955	1956	1957	1958	1959	1960 to 11/30/59
Contingency Fund:							
Annual appropriation acts	\$600,000	\$400,000	\$1,000,000	\$4,400,000	\$1,000,000	\$1,000,000	\$1,500,000
Supplemental appropriation acts	- -	650,000	650,000	3,450,000	- -	500,000	- -
Total appropriations for Contingency Fund	600,000	1,050,000	1,650,000	a/7,850,000	1,000,000	1,500,000	1,500,000
Releases for Control of Emergency Outbreaks of Insects:							
Grasshoppers and Mormon crickets	528,940	284,300	566,000	1,028,000	b/	- -	- -
Burrowing nematode	- -	35,000	150,000	403,000	b/	- -	- -
European chafer	- -	50,000	83,000	80,000	b/	- -	- -
Mexican fruit fly	- -	125,000	137,000	135,000	b/	- -	- -
Mediterranean fruit fly	- -	- -	- -	a/4,675,000	55,000	b/	- -
Witchweed	- -	- -	- -	22,000	330,000	b/	- -
Soybean cyst nematode	- -	- -	30,000	77,000	280,000	320,000	- -
Khapra beetle	- -	156,000	684,000	960,000	135,000	80,000	- -
Pink bollworm	- -	- -	- -	- -	- -	500,000	500,000
Hoja blanca	- -	- -	- -	- -	- -	- -	150,000
Total releases	528,940	650,300	1,650,000	7,380,000	800,000	900,000	650,000
Balance in Contingency Fund	71,060	399,700	- -	470,000	200,000	600,000	850,000

a/ Includes \$1,250,000 which was immediately available in fiscal year 1956 for control of Medfly.

b/ The program is no longer financed regularly from the Contingency Fund.

TABLE II

STATUS OF WITCHWEED



PLANT QUARANTINE

19. Foreign travel continues to set new records. Entries of people into the United States, including daily border traffic, rose from 134.1 million in 1956 to 144.6 million in 1957, and to 151.4 million in 1958. International travel directly affects the plant quarantine workload. The upward trend in such travel is continuing in the calendar year 1959 and is expected to be even more pronounced in 1960.

The following table shows the rate at which international travel and other activities directly affecting the plant quarantine workload increased during the past two fiscal years, and the associated danger of new pests being brought into the country. The table also projects estimated data for the current fiscal year 1960.

Workload Data Fiscal Years 1958 Through 1960

	F.Y. 1958	F.Y. 1959	F.Y. 1960 (Estimated)
<u>Inspection:</u>			
Airplanes, approximately 35% carrying unauthorized plant material in 1959	121,231	133,723	147,500
Vessels inspected, approximately 38% carrying unauthorized material in 1959	55,348	58,995	62,900
Cargo importations of plant material under permit	68,647	79,731	92,600
Mail inspection, packages	35,930,743	37,391,885	38,912,200
Air cargo inspection, packages	786,381	932,091	1,104,800
Misc. cargo inspections (automobiles, machinery, etc., for contamination by plant pests), man hours	30,414	37,209	45,500
Packages cleaned or treated	1,326,189	1,614,016	1,964,300
<u>Cooperation with Customs:</u>			
Vehicles from Mexico	19,434,535	21,119,747	22,951,000
Baggage with surface-borne passengers from Mexico	5,387,531	8,111,060	12,211,400
Baggage, airborne, pieces of (all ports)	8,790,520	9,733,480	10,777,600
Baggage with ships' passengers, number of pieces (all ports)	3,098,998	3,486,640	3,922,700
<u>Interceptions:</u>			
Unauthorized plant material, all sources	311,391	319,713	328,300
Lots of insects and plant diseases of plant quarantine significance, all sources	18,198	25,296	35,200

20. Threat of foreign pest entry continues at all-time high. In fiscal year 1959 plant quarantine inspectors at ports of entry intercepted 25,296 lots containing plant pests, an increase of 7,098 over the preceding year. This dramatically points up the dangers of pest entry created by the increased number of people that are entering the country. The insects, plant diseases, snails, nematodes, and mites intercepted included many of the world's most destructive pests of food and fiber crops, forests, and ornamentals. Fruit flies of economic importance intercepted at our borders included: Mediterranean fruit fly - 99; Mexican fruit fly - 130; oriental fruit fly - 29; melon fly - 9; olive fruit fly - 43; and West Indian fruit fly - 98. The products with these flies were destined for Florida, California, and other states where host fruits are available and climatic conditions are favorable for their establishment.

Other important pests intercepted included: Mediterranean land snail - 87; citrus canker - 82; citrus black fly - 10; golden nematode - 75; khapra beetle - 44; pink bollworm - 17; and black spot of citrus - 211. Passengers' baggage was again one of the most frequent sources of infested and infected plant material interceptions.

21. Opening of St. Lawrence Seaway Exposes Major Agricultural areas to direct entry of foreign pests. The accessibility of Great Lakes ports to ocean-going vessels has opened a broad new avenue for the entry of plant pests into the interior of the country. In the past it has been possible to cover the Lake ports with only a few inspectors. In the short time the seaway has been open, a number of new plant quarantine problems have already become evident.
- a. Port of entry inspection. Foreign ship arrivals are rapidly increasing at Great Lakes ports, some at ports where plant quarantine service is not available. Only a few days after the seaway opened, a ship at Cleveland was found to be infested with the Khapra beetle. The infested holds were fumigated before any cargo was permitted to be discharged. The presence of large numbers of grain elevators in lake ports, and their proximity to the Grain Belt, make the khapra beetle a serious threat to the area.
- b. Export certification. The demand for export certification service at lake ports will greatly increase now that single-loading water-freight shipment is available directly from the Grain Belt. Shipments of grain are being made from ports not presently staffed, necessitating the detail of personnel from other ports.

- c. Dangers from ships' garbage. Ships' garbage often contains infested and infected plant material, as well as unauthorized meat and meat products. Such garbage must be disposed of in a manner that will preclude the escape and establishment of pests or diseases it might harbor. This problem is new to the lake ports and is already causing difficulties. Shortly after the seaway opened to traffic it was necessary to work out safeguards for the discharge of garbage from a ship at Toledo, where facilities for incineration are not available. Procedures must be devised for the safe handling of ships' garbage at all of the lake ports by incineration or some equally effective treatment.
- d. Close cooperation with Canadian officials and other interests associated with foreign shipping at lake ports required. Ships using the St. Lawrence Seaway touch at ports in both Canada and the U. S. A new pest entering at any port on the route presents an immediate threat to the other country. Close working relationship will be necessary to coordinate work on these mutual problems.

In addition, many importers, exporters, customs brokers, transportation agencies and others concerned with the foreign shipments at lake ports must be familiarized with quarantine regulations and safeguards which must be applied.

22. Heavy volume of vehicular traffic from Mexico necessitates opening new border crossings. In 1959 over 21 million vehicles entered the United States through Mexican border ports, an increase of almost 2 million over the preceding year. Present crossing facilities are not adequate to handle this volume of traffic. A new border crossing was opened at El Paso in August, 1959 to relieve congestion at that port, and another crossing will be opened near Mission, Texas in December 1959. Both stations require plant quarantine inspection staffs. Facilities at other ports are being renovated to provide for additional traffic lanes, which also will have to be staffed.

Automobile and truck traffic entering at Naco, Arizona and Fabens and Falcon, Texas had increased to the point where there is urgent need for plant quarantine coverage at those ports.

The importation of Mexican vegetables through Nogales, Arizona has been growing steadily in recent years and reached an all-time high in 1959. The demand for prompt plant quarantine clearance at that port is exceedingly heavy.

23. Preflight clearance of aircraft inaugurated in Nassau. The Customs and Immigration and Naturalization services have initiated a practice of clearing passengers on scheduled flights from Nassau to the United States prior to departure

from those points. Since agricultural quarantine clearance of passengers and baggage must be effected simultaneously with Customs clearance, it will be necessary to station inspectors at Nassau for that purpose. A minimum of three inspectors will be required. They will be concerned with both plant and animal quarantine problems.

ANIMAL DISEASE AND PEST CONTROL

Current activities: Measures are devised to exclude from this country communicable animal diseases of foreign origin; to prevent the spread of communicable diseases through interstate shipments of livestock or distribution of impure or impotent veterinary biologics; to control and eradicate livestock diseases; and to maintain, through a marketing agreement with manufacturers and handlers, adequate supplies of hog cholera virus, serum, and vaccine for protection of swine.

Selected Examples of Recent Progress:

Animal Disease Control and Eradication:

1. Tuberculosis eradication:

- a. Comprehensive epidemiological projects were instituted in cooperation with several States to provide essential program information. Up-to-date information regarding the epidemiology of bovine tuberculosis and the relationship of other mycobacterial diseases, such as human and avian tuberculosis and paratuberculosis, is essential for greater effectiveness of operation in various phases of eradication. Such information will enable further progress in determining the extent to which various related mycobacterial diseases enter into the program of bovine tuberculosis detection and eradication.
- b. National eartagging plan aids in tracing infected and exposed animals. Such tracing is essential to early disclosure of infection in cattle and subsequent reduction in human exposure. A national eartagging plan has been devised and placed in operation in cooperation with many of the States through the Dairy Herd Improvement Association, National Artificial Breeders Association, and the Department. The plan provides a uniform numbering system with appropriate record controls to facilitate greater ease and thoroughness in tracing individual animal movements. There are currently 40 States which are now operating in this cooperative plan. During the fiscal year 1959, case finding procedures resulted in disclosure of many foci of infection.

- c. A comparison of funds provided by the Federal Government and cooperating States and counties for the eradication of tuberculosis for the fiscal years 1959 and 1960 follows:

Item	F.Y. 1959		F.Y. 1960	
	Federal Government	Cooperators	Federal Government	Cooperators
Operating funds	\$1,588,950	\$4,789,390	\$1,703,300	\$5,271,784
Indemnity payments	478,285	744,732	440,000	814,393
Totals	2,067,235	5,534,122	2,143,300	6,086,182

- d. Tables III and IV show the average State and Federal indemnity payments and other data pertaining to the program for control and eradication of tuberculosis.

2. Brucellosis eradication:

- a. Over half of all counties in the United States and Territories are now Modified Certified Brucellosis Areas. This reflects the continued strong support being given the eradication effort in most sections of the country and confirms the value of procedures being employed. Fiscal year 1959 marked the first time the cooperative brucellosis program was operating on an area basis in all States.

Table V shows the brucellosis program activities conducted during fiscal year 1959. While there was a slight reduction as compared with 1958, in the volume of blood and ring testing, the levels are comparable to those maintained over the past few years. The consistent increase in calf vaccinations noted each year since Strain 19 vaccine became a part of the official program was continued.

- b. Infection rates were reduced further. The blood testing of 14 million cattle in almost 1 million herds during 1959 revealed 1.5 percent reactor cattle and 8.2 percent reactor herds compared with 1.6 percent and 9.2 percent respectively in 1958. This reduced infection is especially significant because much of the 1959 blood testing was restricted to herds showing evidence of infection from ring test results.
- c. Modified Certified Brucellosis Areas continued to increase at an encouraging rate. In fiscal year 1959, 436 new counties were listed as Modified Certified Areas as compared with 490 certifications recorded during 1958. To meet the requirements necessary for this designation, infection must be reduced to not more than 1 percent of the cattle and 5 percent of the herds. At the close of fiscal year 1959, a total of 1,653 counties in 47 States were designated as

Modified Certified Areas. Work is continuing in an additional 504 counties to reduce the infection rate in their respective areas so they may be classified as modified certified. (See Figure 20).

It is noteworthy that on the last complete area test no reactors were found in 152 of the modified certified counties. This emphasizes the value of the certification program in moving towards complete eradication of bovine brucellosis.

- d. Uses of composite Babcock samples as a source of milk for the ring test has been found to be a reliable and economic procedure in locating Brucella infection in dairy herds. This method of conducting the ring test has been subjected to both controlled laboratory and field studies. During the year additional States have modified their ring testing programs to make use of the Babcock sample method. At present, 26 States are utilizing this new procedure which is contributing much toward more efficient program operations. Nearly 1,697,000 herds of cattle were tested by the ring test in fiscal year 1959. Of these 6.1 percent reacted as suspicious to the test as compared with 9.4 percent in fiscal year 1958.
- e. Method developed for wide-scale testing of range and semi-range herds. This procedure covers the collection of blood samples at slaughtering establishments or other concentration points as a means of screening range and semi-range herds for evidence of brucellosis. It can be used to advantage in the recertification of range areas and will provide benefits comparable to ring testing in dairy areas. As cull and dry cattle move to market, they will be identified and the results of blood tests conducted at the time of slaughter will be credited to the respective States, counties, and herds of origin. Under this procedure it will be necessary to blood test only those herds showing evidence of infection. It is anticipated that this recertification method will be operating in several States during the current year at the time cull and dry cows are normally moved to market.
- f. Data comparing brucellosis eradication activities in fiscal year 1959 with fiscal year 1958 follows:

	<u>FY 1958</u>	<u>FY 1959</u>
<u>Brucellosis Ring Tests</u>		
Herds tested	1,750,510	1,696,920
Estimated cattle in herds tested .	30,927,215	30,693,440
Suspicious herds	164,224	103,987
Percent of herds suspicious	9.4	6.1

STATEMENT OF COMPARATIVE TESTING, HERDS AND CATTLE UNDER SUPERVISION, MODIFIED ACCREDITED AREAS
AVERAGE APPRAISAL, SALVAGE, AND STATE AND FEDERAL INDEMNITY IN TUBERCULOSIS ERADICATION WORK
FISCAL YEAR 1935 TO 1959 INCLUSIVE

Fiscal Year	TESTS CONDUCTED		Reactors Found	Per- cent Infec- tion	UNDER SUPERVISION		Modi- fied Accred- ited Areas(a)	AVERAGE DURING YEAR			
	Herds	Cattle			Herds	Cattle		Appraisal	Salvage	State Indemnity	Federal Indemnity
1935	2,378,668	25,237,532	376,623	1.5	6,590,863	48,768,627	2,428	\$ 57.55	\$ 15.19	\$ 15.87	\$ 18.70
1936	1,944,624	22,918,038	165,496	.7	6,515,273	59,907,935	2,921	77.66	26.50	10.18	22.44
1937	961,109	13,750,308	94,104	.7	6,745,471	61,640,711	3,030	86.04	28.94	12.20	22.72
1938	1,007,586	14,108,801	89,359	.6	6,471,538	62,640,358	3,124	86.76	32.16	16.41	18.12
1939	750,806	11,186,805	60,338	.5	6,372,720	60,439,030	3,142	89.01	34.49	18.96	15.97
1940	819,408	12,222,318	56,343	.46	6,191,330	61,570,426	3,148	91.05	37.12	20.44	16.20
1941	777,435	12,229,499	40,702	.3	6,235,198	62,696,167	3,151	96.50	40.99	20.95	16.48
1942	681,504	10,983,086	28,008	.26	6,320,006	63,073,213	3,151	109.69	50.35	21.49	16.55
1943	563,443	9,308,936	17,167	.18	6,317,670	63,946,496	3,151	135.19	65.03	27.50	18.75
1944	524,927	8,894,466	18,338	.2	6,153,069	64,519,652	3,151	154.53	59.93	36.07	21.72
1945	484,749	8,105,480	19,534	.24	6,120,528	64,790,921	3,151	161.32	59.78	40.31	22.71
1946	505,296	8,454,463	19,464	.23	6,035,783	65,981,099	3,150(b)	174.20	69.00	37.26	23.89
1947	515,517	8,312,919	16,666	.2	6,082,666	65,577,421	3,150	199.46	83.55	40.81	24.19
1948	523,924	8,294,423	15,943	.19	6,044,170	66,246,215	3,150	234.60	119.74	38.53	23.90
1949	536,162	8,737,501	17,007	.19	5,985,215	65,419,332	3,150	285.78	139.46	37.68	24.72
1950	539,799	9,439,811	17,733	.19	5,991,703	65,443,353	3,150	272.87	123.24	43.40	25.05
1951	503,933	8,847,228	12,353	.14	5,808,062	61,824,960	3,149(c)	323.70	174.64	43.59	24.92
1952	488,769	9,164,265	10,351	.11	5,798,865	64,791,861	3,149	346.13	174.05	46.15	25.66
1953	463,159	9,675,245	10,811	.11	5,688,183	67,423,940	3,149	309.47	117.31	49.22	26.12
1954	478,975	10,234,665	10,886	.11	5,681,947	67,937,276	3,149	250.92	82.18	43.76	26.60
1955	417,683	9,210,810	11,133	.12	4,669,733	79,567,058	3,149	235.10	77.63	45.24	25.28
1956	418,059	9,220,244	14,363	.15	4,645,342	86,869,478	3,148(b)	246.52	89.43	39.97	25.60
1957	414,162	8,976,409	13,974	.16	4,229,996	85,272,126	3,150(d)	255.69	94.06	38.44	25.78
1958	396,587	8,883,813	15,361	.17	4,108,329	86,573,974	3,150	301.81	133.27	36.65	26.13
1959	366,357	8,187,161	18,914	.23	3,954,681	86,730,187	3,148(b)	352.17	167.27	32.68	26.10

- (a) Includes Puerto Rico and the Virgin Islands
(b) Reduction is due to consolidation of Counties
(c) Reduction is due to no cattle in District of Columbia
(d) Increase is due to addition of new Counties

TABLE III

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
ANIMAL DISEASE ERADICATION DIVISION

SUMMARY OF BOVINE TUBERCULOSIS ERADICATION IN COOPERATION WITH THE VARIOUS STATES
FISCAL YEAR 1959

State	Herds Tested	Cattle Tested	Infected Premises	Percent Infected	Reactors Found	Percent Reactors
Alabama	1,673	76,353	10	0.60	14	0.02
Arizona	1,105	27,308	26	2.35	61	0.22
Arkansas	2,796	52,674	2	0.07	2	0.01
California	13,962	704,805	526	3.77	2,049	0.29
Colorado	857	19,571	4	0.47	4	0.04
Connecticut	5,421	134,518	42	0.77	82	0.06
Delaware	1,952	38,779	8	0.41	10	0.03
Florida	2,995	221,572	107	3.57	650	0.29
Georgia	2,755	90,202	27	0.98	174	0.19
Idaho	1,845	42,197	8	0.43	8	0.02
Illinois	11,977	298,204	182	1.52	370	0.12
Indiana	18,521	215,040	144	0.78	238	0.11
Iowa	4,382	116,548	126	2.88	222	0.19
Kansas	8,105	163,885	37	0.46	53	0.03
Kentucky	6,079	82,401	67	1.10	198	0.24
Louisiana	1,943	99,990	34	1.75	105	0.12
Maine	4,525	76,278	4	0.09	5	0.01
Maryland	11,363	271,554	65	0.57	84	0.03
Massachusetts	7,897	156,832	29	0.37	42	0.03
Michigan	19,843	374,897	2,872	14.47	5,924	1.58
Minnesota	34,981	624,818	141	0.40	221	0.04
Mississippi	2,415	71,257	10	0.41	24	0.03
Missouri	10,226	223,308	13	0.13	19	0.01
Montana	1,072	32,961	3	0.28	4	0.01
Nebraska	2,948	78,209	44	1.49	66	0.08
Nevada	550	7,749	7	1.27	12	0.15
New Hampshire	6,790	82,392	4	0.06	8	0.01
New Jersey	6,132	187,943	166	2.71	219	0.12
New Mexico	709	23,615	1	0.14	10	0.04
New York	16,986	411,679	164	0.97	492	0.12
North Carolina	9,294	172,763	9	0.10	22	0.01
North Dakota	896	21,848	23	2.57	47	0.22
Ohio	25,768	352,879	630	2.44	1,004	0.28
Oklahoma	3,873	112,996	58	1.50	108	0.05
Oregon	6,869	83,738	23	0.33	25	0.03
Pennsylvania	33,354	526,668	231	0.69	690	0.13
Rhode Island	1,562	21,233	5	0.32	5	0.02
South Carolina	3,064	66,469	9	0.29	16	0.02
South Dakota	1,277	58,022	40	3.13	93	0.16
Tennessee	3,720	99,866	46	1.24	88	0.09
Texas	11,567	292,126	98	0.85	240	0.08
Utah	4,478	41,770	88	1.97	105	0.25
Vermont	5,189	143,787	44	0.85	127	0.09
Virginia	7,080	228,158	25	0.35	70	0.03
Washington	1,476	39,724	18	1.22	28	0.07
West Virginia	2,046	46,888	8	0.39	14	0.03
Wisconsin	27,020	716,543	1,954	7.23	4,716	0.66
Wyoming	1,001	18,426	22	2.20	67	0.36
Alaska	126	1,967	0	0.0	0	0.0
Hawaii	531	24,812	17	3.20	63	0.25
Puerto Rico	3,361	108,939	13	0.39	16	0.01
TOTALS	366,357	8,187,161	8,234	2.247	18,914	0.231

TABLE IV

SUMMARY OF BOVINE BRUCELLOSIS ERADICATION IN COOPERATION WITH THE VARIOUS STATES

FISCAL YEAR 1959

BRUCELLOSIS BLOOD TESTS AND CALFHOOD VACCINATIONS															BRUCELLOSIS RING TESTS				
State or Territory	Herds Tested	Cattle	Infected Herds				Reactors				Calves Vaccinated	Herd Tests	Estimated Cattle Represented	Suspicious Herd Tests	Percent Suspicious Herds	Estimated Negative Cattle			
			Number	* Per-cent	** Per-cent	Number Found	* Per-cent	** Per-cent											
Alabama	21,312	216,808	1,789	8.1	7.5	4,217	1.72	1.20	66,725	5,890	259,160	969	16.5	216,521					
Arizona	4,182	82,543	218	5.2	4.6	1,131	1.13	0.74	18,793	1,302	103,618	194	11.9	87,160					
Arkansas	34,978	315,907	3,254	9.3	7.6	7,667	1.81	1.45	117,301	18,280	275,392	2,915	16.1	229,328					
California	13,095	358,006	1,225	9.1	7.2	5,777	1.61	0.93	139,698	10,360	719,876	2,363	22.8	522,078					
Colorado	12,131	191,163	887	7.3	5.7	2,779	0.93	0.59	117,117	7,370	118,318	138	5.9	108,433					
Connecticut	4,510	97,636	185	4.1	2.6	261	0.27	0.18	20,748	5,617	111,715	521	9.3	102,111					
Delaware	1,999	30,662	24	1.2	0.8	51	0.17	0.09	5,132	2,072	50,451	54	2.6	49,118					
Florida	8,976	298,182	775	8.6	7.2	6,599	1.72	0.92	106,112	7,112	1,554,165	3,160	18.1	140,700					
Georgia	31,095	598,169	2,122	7.8	7.0	7,136	1.19	0.82	61,156	7,928	1,531,618	1,257	15.9	363,256					
Illinois	52,919	1,521,157	1,558	7.1	2.8	1,627	1.07	0.48	183,459	26,811	1,021,165	2,107	7.9	370,560					
Indiana	33,997	477,121	2,304	4.1	2.6	4,554	0.95	0.56	134,224	75,607	687,782	1,921	2.5	670,274					
Iowa	49,571	442,199	4,933	10.0	3.9	11,713	2.65	0.89	257,119	167,120	1,883,221	11,606	6.9	592,764					
Kansas	17,143	186,633	2,205	12.6	4.8	4,315	2.33	0.16	253,108	64,519	1,835,815	7,215	11.2	1,752,161					
Kentucky	53,981	559,511	4,268	7.9	6.2	10,753	1.92	1.19	81,965	31,287	369,540	4,013	11.8	1,529,144					
Louisiana	11,207	435,693	4,852	34.2	29.1	20,189	4.70	3.99	104,135	7,052	225,993	2,165	30.7	326,122					
Maine	4,586	63,715	104	2.3	1.3	152	0.24	0.10	19,073	7,337	192,888	45	0.6	154,856					
Maryland	11,561	268,361	219	1.7	1.3	861	0.32	0.24	53,510	9,441	144,120	482	4.6	175,931					
Massachusetts	35,558	90,678	338	6.2	4.0	554	0.61	0.36	17,182	6,795	135,900	585	8.6	124,200					
Michigan	328,120	3,577	10.1	1.4	7.955	2.42	0.78	81,927	195,601	1,456,176	4,336	4.5	1,390,269						
Minnesota	59,011	983,972	3,214	5.4	2.5	6,862	0.70	0.29	195,559	114,582	2,831,640	3,187	2.3	2,767,900					
Mississippi	20,810	294,011	1,775	8.5	5.9	6,573	1.67	1.01	112,430	19,951	554,820	1,500	7.7	508,440					
Missouri	73,467	857,751	6,069	8.2	4.7	12,937	1.48	0.87	313,892	118,144	1,358,657	7,305	6.2	1,274,619					
Montana	122,383	302	6.4	3.1	1,002	0.82	0.58	290,550	9,899	98,990	117	1.2	97,820						
Nebraska	14,318	185,911	1,176	8.2	5.9	2,880	1.57	0.39	464,765	94,424	1,115,912	1,815	1.9	1,124,201					
Nevada	1,715	96,802	114	8.4	7.6	314	0.36	0.33	74,735	390	16,265	6	1.5	15,810					
New Hampshire	4,930	66,792	24	0.5	0.5	43	0.06	0.06	10,775	193	4,601	3	1.5	4,513					
New Jersey	5,599	133,722	609	10.9	7.5	783	0.59	0.35	16,400	5,579	206,825	588	10.5	184,251					
New Mexico	5,212	73,453	164	3.1	2.7	330	0.15	0.38	40,118	2,003	26,917	60	3.0	26,192					
New York	28,398	531,197	5,253	18.5	7.1	8,171	1.53	0.61	283,181	90,633	1,694,879	5,189	5.7	1,598,839					
North Carolina	24,931	276,310	1,481	1.9	1.4	2,277	0.46	0.31	7,215	18,951	283,865	182	1.0	280,672					
North Dakota	13,367	231,058	1,121	8.4	7.3	3,769	1.63	1.14	165,591	4,014	61,380	61	1.5	60,367					
Ohio	39,660	363,895	3,037	7.7	3.7	7,015	1.91	0.76	79,867	94,360	1,235,244	8,193	8.7	1,128,138					
Oklahoma	15,652	262,670	2,693	17.2	10.4	6,462	2.50	1.63	169,703	22,272	305,692	1,674	7.5	280,811					
Oregon	18,359	271,365	832	4.5	3.0	2,200	0.30	0.18	161,117	19,080	381,866	536	2.7	370,766					
Pennsylvania	34,353	593,208	1,281	3.7	1.7	2,038	0.31	0.11	117,686	79,207	1,674,677	1,502	1.9	1,610,511					
Rhode Island	1,419	17,043	52	3.7	2.3	76	0.15	0.23	2,306	1,058	37,160	270	14.5	31,760					
South Carolina	11,761	156,750	390	3.3	2.7	1,018	0.57	0.50	18,412	5,421	109,750	222	4.1	103,610					
South Dakota	19,919	301,423	1,851	9.3	6.3	5,416	1.80	1.16	282,312	20,312	310,200	1,356	6.7	331,864					
Tennessee	43,353	517,503	3,215	7.4	5.7	7,780	1.50	1.14	196,164	31,307	446,468	8,064	23.5	334,974					
Texas	29,091	196,628	5,536	17.0	15.6	22,659	4.54	3.43	225,216	20,220	674,250	2,234	35.8	322,506					
Utah	3,678	39,252	308	8.4	2.4	619	1.45	0.35	83,696	18,193	297,304	218	1.2	293,776					
Vermont	2,007	130,133	649	10.8	1.9	1,190	0.91	0.29	56,182	15,891	606,302	1,167	7.3	562,441					
Virginia	25,006	356,193	891	3.6	3.5	2,112	0.81	0.60	100,021	1,008	1,799	71	7.0	1,696					
Washington	1,604	116,705	379	4.7	2.4	1,009	0.69	0.39	127,064	15,807	237,105	1,090	3.1	229,755					
West Virginia	21,013	223,194	1,255	2.0	2.0	877	0.39	0.39	10,974	6	133	0	0.0	133					
Wisconsin	16,807	358,716	2,028	12.1	1.7	3,718	1.04	0.15	579,207	205,433	4,316,193	4,553	2.2	4,220,580					
Wyoming	2,674	87,824	211	7.9	4.4	662	0.75	0.56	1,006,618	4,300	61,500	159	3.7	62,115					
Alaska	98	762	3	1.0	0.7	3	0.39	1.16	1,200	103	2,316	0	0.0	2,316					
Hawaii	920	38,018	107	11.6	11.4	584	1.53	1.43	1,918	74	7,893	44	59.5	5,335					
Puerto Rico	7,684	197,992	769	10.0	9.3	1,519	0.77	0.67	16,728	1,397	66,338	204	11.6	56,795					
Virgin Islands	35	47,374	14	40.0	40.0	22	0.50	0.50	0	0	0	0	0.0	0					
TOTALS	984,576	11,168,909	81,226	8.2	4.6	214,331	1.51	0.77	6,702,832	1,696,920	30,693,440	103,987	6.1	27,301,134					

* Percent of herd and cattle blood tests only.

** Percent of herd and cattle infection in States conducting Brucellosis Ring Tests calculated on basis of total blood tests and one half of the RT Negative Herds and cattle. The total number of RT Negative Herds and cattle are divided in half due to the fact that Ring Tests are conducted in most of the States on a semi-annual basis.

TABLE V

Cooperative State - Federal BRUCELLOSIS ERADICATION PROGRAM

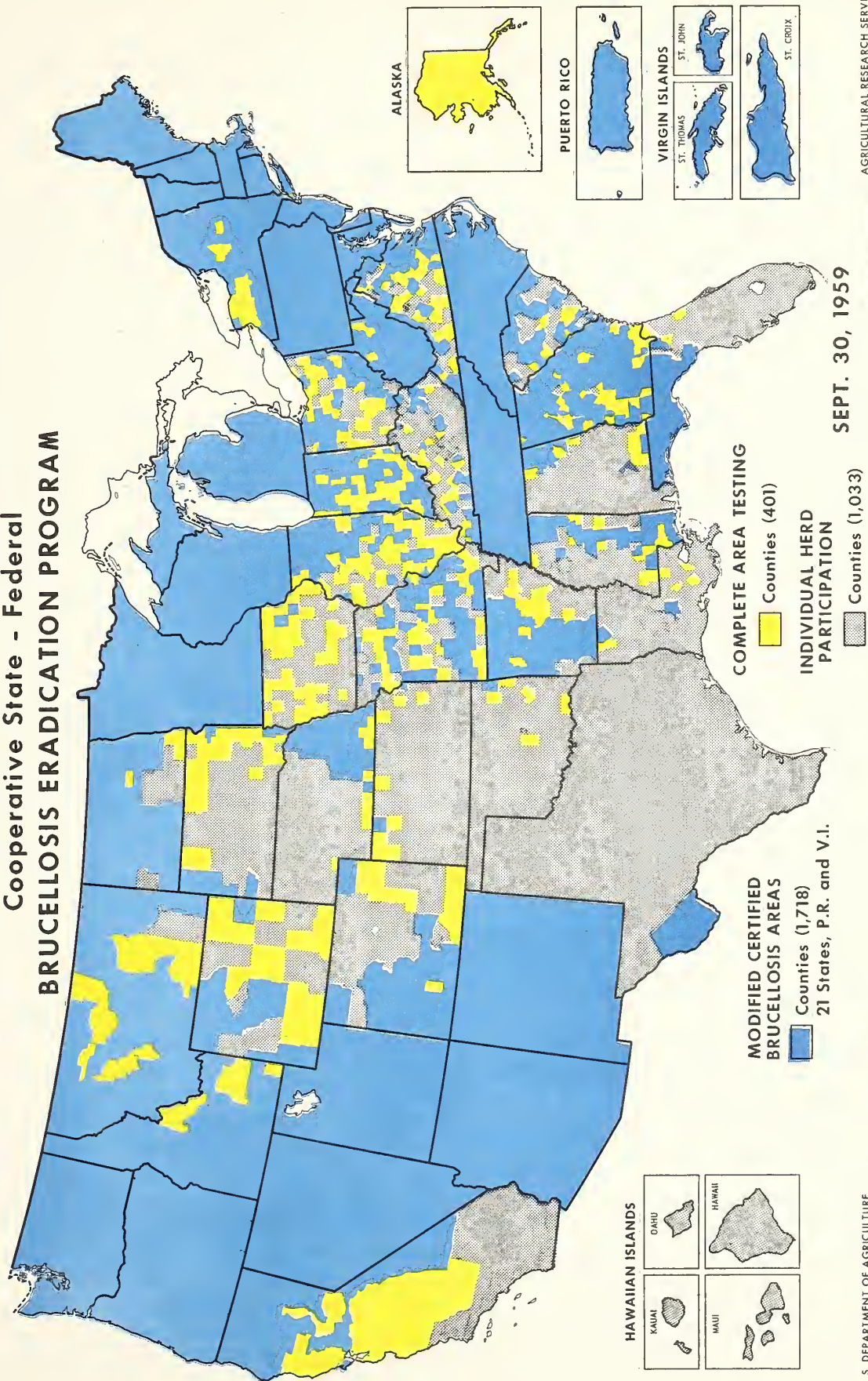


FIGURE 20

FY 1958

FY 1959

Blood tests

Herds tested	1,176,601	984,576
Cattle tested	16,251,440	14,168,909
Infected herds found	108,560	81,226
Percent of herds infected a/	9.2	8.2
Reactors found	260,322	214,331
Percent of cattle infected a/	1.6	1.5
Reactors slaughtered	254,458	203,495
Percent of reactors slaughtered	97.7	94.9

<u>Calves vaccinated</u>	6,276,910	6,702,832
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Certification

Counties certified during year	490	436
States certified during year	9 b/	5
Total counties certified at end of year	1,217	1,653
Total states certified at end of year b/	16	21
Herds under supervision	2,867,519	2,994,212
Cattle under supervision	51,693,159	54,454,911

a/ Based on results of blood tests only. If those herds and cattle that were negative to the brucellosis ring test were included, the percent of infected herds would be 5.3 in 1958 compared to 4.6 in 1959 and percent of cattle infected would be 0.88 compared to 0.77 in 1959.

b/ Includes Puerto Rico.

g. Brucellosis eradication obligations for Fiscal Years 1956 through 1960 (estimated) follow:

<u>Fiscal Year</u>	<u>Operating Costs</u>	<u>Indemnities</u>	<u>Total</u>
A. <u>Federal Funds: 1/</u>			
1956	\$14,125,249	\$6,060,351	\$20,185,600
1957	16,576,862	4,422,720	20,999,582
1958	18,492,681	3,759,095	22,251,776
1959	17,819,467	2,410,383	20,229,850
1960 (est.)	14,937,100	1,700,000	16,637,100
B. <u>Funds provided by cooperating States and counties:</u>			
1956	11,595,852	4,134,627	15,730,479
1957	12,159,444	3,632,118	15,841,562
1958	13,183,201	3,522,744	16,705,945
1959	14,620,684	2,444,277	17,064,961
1960 (est.)	12,968,000	1,990,000	14,958,000

- 1/ For fiscal years 1956 through 1958 includes funds transferred from Commodity Credit Corporation. Beginning in fiscal 1959 Federal financing has been provided entirely under the appropriation, "Salaries and expenses, ARS."

h. Figures 21 and Tables VI to VIII show other data relative to the brucellosis eradication program.

3. Scabies eradication.

- a. Field employees trained in diagnostic methods. A training course at Iowa State College was attended by state and Federal inspectors conducting scabies eradication work in Iowa, Illinois, Kansas, Missouri, Nebraska, Oklahoma, South Dakota, and Texas. Members of the college faculty, State regulatory officials, and Department representatives participated as instructors. The course provides field employees with the most recent information concerning scabies problems; and trains them in the use of effective diagnostic methods and equipment.
- b. More sheep with psoroptic scabies found. A comparison of program activities for fiscal years 1958 and 1959 follows:

	<u>FY 1958</u>	<u>FY 1959</u>
Sheep inspected	9,500,782	10,848,946
Sheep dipped	356,854	309,609
Infected sheep located	57,405	68,626
Infected flocks	726	736
States reporting sheep scabies	24	24
Counties reporting sheep scabies ..	300	276

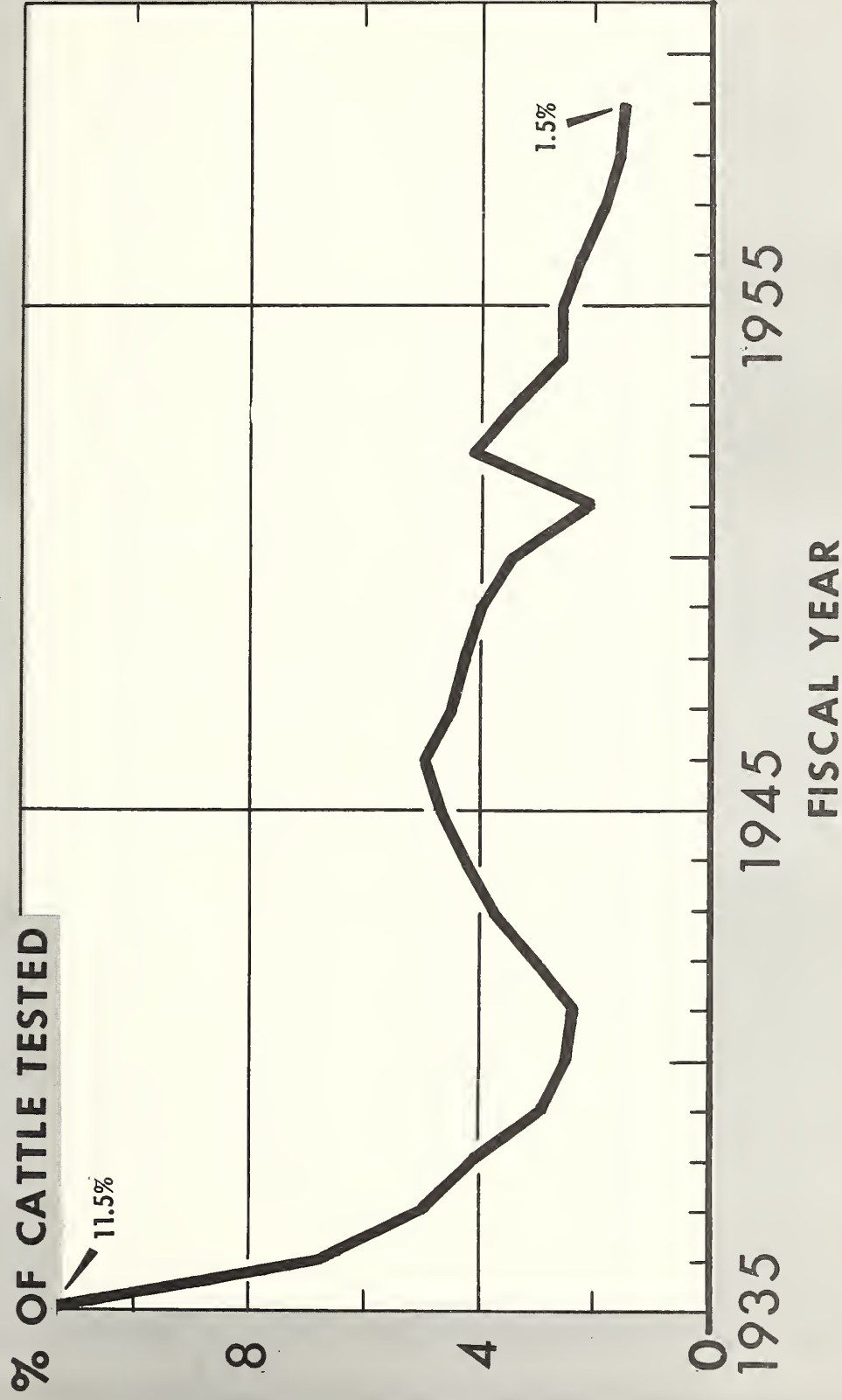
Indiana and Ohio instituted compulsory dipping of all sheep moved through public sales. With increased field inspection and proper treatment of exposed and infected flocks, there is encouraging progress in the scabies program. Table IX shows program activities by States and Figure 22 illustrates areas of infection.

- c. Infestations of psoroptic cattle scabies continue to be limited. In February 1959, a Federal quarantine was placed upon three counties in Kansas. Following careful inspections and appropriate treatment of all flocks in these counties, the quarantine was lifted on all but one county.

4. Cattle fever tick eradication required fewer dippings. The tick eradication force conducted 2,097,587 inspections and dippings in fiscal year 1959 as compared with 2,831,784 in 1958 and 1,931,902 in 1957. During fiscal year 1959, 15 horses and 15 cattle which had strayed from Mexico into the inspection zone were caught by Department inspectors. Five of the cattle were found to be tick infested.

BLOOD TESTING: REACTORS FOUND

Cooperative State-Federal Brucellosis Eradication Program



Brucellosis Eradication

Fiscal Year 1959

State	FEDERAL			STATE		
	Indemnity Payments	Operating Cost	Total	Indemnity Payments	Operating Cost	Total
Alabama	64,725	340,572	405,297	-	100,000	100,000
Arizona	19,650	135,318	154,968	10,000	41,832	51,832
Arkansas	123,695	622,756	746,451	-	220,000	220,000
California	151,055	571,810	722,865	500,000	990,374	1,490,374
Colorado	24,564	235,402	259,966	-	26,363	26,363
Connecticut	5,036	41,071	46,107	25,000	143,337	168,337
Delaware	684	17,874	18,558	2,500	25,000	27,500
D. C. & Regional Business Offices	-	1,827,988	1,827,988	-	-	-
Florida	19,658	301,847	321,505	45,729	246,648	292,377
Georgia	91,910	600,667	692,577	160,000	500,900	660,900
Idaho	32,069	326,445	358,514	7,500	167,500	175,000
Illinois	105,220	283,707	388,927	238,625	814,338	1,052,963
Indiana	102,663	408,805	511,468	-	621,870	621,870
Iowa	150,037	688,855	838,892	200,000	1,087,000	1,287,000
Kansas	19,525	411,467	430,992	-	200,000	200,000
Kentucky	131,622	409,185	540,807	-	300,000	300,000
Louisiana	178,222	541,016	719,238	50,000	312,000	362,000
Maine	3,858	67,182	71,040	12,000	95,000	107,000
Maryland	8,297	295,318	303,615	45,000	172,034	217,034
Massachusetts	13,165	159,254	172,419	20,000	120,000	140,000
Michigan	177,460	483,663	661,123	2,000	398,274	400,274
Minnesota	9,648	685,824	695,472	59,000	411,210	470,210
Mississippi	81,047	449,419	530,466	-	164,850	164,850
Missouri	134,470	630,189	764,659	250,000	916,917	1,166,917
Montana	-	376,613	376,613	-	175,000	175,000
Nebraska	64,577	678,709	743,286	15,000	300,000	315,000
Nevada	8,827	206,050	214,877	-	71,704	71,704
New Hampshire	708	40,908	41,616	4,500	64,608	69,108
New Jersey	20,110	135,697	155,807	90,000	117,920	207,920
New Mexico	6,693	176,665	183,358	6,000	50,000	56,000
New York	-	232,348	232,348	-	1,156,795	1,156,795
North Carolina	22,173	172,061	194,234	15,000	116,827	131,827
North Dakota	21,222	239,792	261,014	-	132,000	132,000
Ohio	-	266,446	266,446	-	296,000	296,000
Oklahoma	38,827	354,259	393,086	-	130,000	130,000
Oregon	16,632	348,383	365,015	25,000	253,740	278,740
Pennsylvania	55,812	364,353	420,165	240,000	610,000	850,000
Rhode Island	438	14,812	15,250	11,000	38,696	49,696
South Carolina	18,032	197,359	215,391	18,000	109,500	127,500
South Dakota	65,904	279,390	345,294	40,000	300,000	340,000
Tennessee	165,964	687,101	853,065	-	471,200	471,200
Texas	-	270,234	270,234	-	142,818	142,818
Utah	15,285	226,881	242,166	-	75,826	75,826
Vermont	20,977	150,002	170,979	30,000	120,000	150,000
Virginia	47,550	336,673	384,223	-	325,000	325,000
Washington	22,855	343,413	366,268	49,000	116,875	165,875
West Virginia	5,925	200,057	205,982	8,988	111,972	120,960
Wisconsin	96,259	647,085	743,344	179,435	1,003,862	1,183,297
Wyoming	6,589	189,526	196,115	-	85,000	85,000
Alaska	75	-	75	-	-	-
Hawaii	5,925	15,932	21,857	40,000	75,000	115,000
Puerto Rico	34,744	133,084	167,828	45,000	94,894	139,894
TOTALS	2,410,383	17,819,467	20,229,850	2,444,277	14,620,684	17,064,961

TABLE VI

STATEMENT OF COMPARATIVE BRUCELLOSIS TESTING
HERDS AND CATTLE UNDER SUPERVISION
FISCAL YEARS 1935 to 1959 INCLUSIVE

Fiscal Year	Blood Tests			Milk Ring Tests				Under Supervision	
	Herds	Cattle	Reactor Cattle		Herd Tests	Estimated Cattle		(As of June 30 Yearly)	
			Number	Percent		Number	Percent		
1935	212,482	3,317,760	381,010	11.5				187,109	2,936,347
1936	470,788	6,674,709	457,104	6.8				449,644	5,780,418
1937	630,917	8,021,167	397,864	5.0				719,452	7,877,612
1938	671,310	7,837,443	324,532	4.1				1,035,454	9,447,137
1939	724,613	7,591,398	219,165	2.9				1,372,410	11,111,643
1940	590,393	6,937,428	171,953	2.5				1,615,755	12,315,329
1941	677,544	7,465,254	182,075	2.4				1,883,914	13,932,693
1942	591,835	6,891,219	209,238	3.0				2,105,294	15,627,027
1943	392,636	5,185,228	197,329	3.8				2,199,535	16,616,522
1944	386,266	5,235,912	226,079	4.3				2,254,235	17,326,138
1945	395,236	5,213,458	243,050	4.7				2,307,585	17,545,638
1946	389,814	4,876,866	245,786	5.0				2,360,699	17,870,154
1947	454,789	5,133,814	232,293	4.5				2,249,118	17,589,018
1948	533,936	5,434,792	232,199	4.3				2,291,760	18,128,318
1949	563,501	5,671,347	226,691	4.0				2,165,364	17,126,480
1950	618,801	5,974,721	208,298	3.5	Became Official Part of Program	FY 1952		2,299,556	18,527,624
1951	565,155	5,640,836	172,322	3.1				2,324,621	19,197,790
1952	670,738	7,491,327	314,260	4.2	503,759	9,396,255	135,967	2,149,078	21,496,113
1953	660,344	7,860,870	268,348	3.4	670,532	12,234,810	175,909	2,102,545	21,607,676
1954	696,207	9,002,109	235,666	2.6	932,003	16,633,034	242,914	2,298,284	24,572,013
1955	984,541	14,186,241	365,247	2.6	1,200,898	20,444,994	278,847	2,585,277	31,948,708
1956	1,154,962	16,754,195	366,524	* 1.25	1,727,581	28,361,691	255,503	2,737,483	42,582,071
1957	1,170,906	15,913,396	280,253	** 0.96	1,866,444	31,481,474	212,580	2,697,184	50,858,016
1958	1,176,601	16,251,440	260,322	** 0.88	1,750,510	30,927,215	164,224	2,867,519	51,693,159
1959	984,576	14,168,909	214,331	** 0.77	1,696,920	30,693,440	103,987	2,994,212	54,454,911

* Percent of infection in States conducting Brucellosis Ring Tests calculated on basis of total blood tests and total BRT negative tests for the last six months.

** Percent of infection in States conducting Brucellosis Ring Tests calculated on basis of total blood tests and $\frac{1}{2}$ of total BRT negative tests for Fiscal Years 1957, 1958, & 1959.

TABLE VII

AVERAGE APPRAISAL, SALVAGE, AND INDEMNITIES IN BRUCELLOSIS ERADICATION WORK

FISCAL YEAR 1935 to 1959 INCLUSIVE

Fiscal Year	Reactors on Which Indemnity Was Paid	Percent Purebred Cattle	Average Appraisal	Average Salvage	INDEMNITY PAID BY			
					Federal		State	
					No. of States in Which Paid	Average Amount	No. of States Paying Indemnity	Average Amount
	Figures not available				Figures not available			
1935	439,041	18.0	\$ 56.86	\$ 19.87	48	\$ 24.29	1	\$ 27.99
1936	352,092	11.0	70.65	27.44	48(a)	26.86	2	20.57
1937	278,619	9.0	70.67	27.94	47(a)	26.45	5	19.25
1938	182,285	9.0	80.37	32.07	47	26.69	10	20.36
1939	119,660	9.0	97.17	33.97		20.00	28	26.09
1940	129,225	11.0	90.85	34.99	36	14.96	36	17.12
1941	127,274	10.0	93.28	37.68	39	15.19	39	17.19
1942	91,065	9.0	99.19	52.06	41	15.83	41	17.71
1943	81,677	10.0	128.03	64.87	39(a)	16.77	39(a)	18.63
1944	89,766	10.0	143.34	59.75	40(a)	19.30	40(a)	22.54
1945	82,586	10.0	139.35	56.63	39(a)	19.25	39(a)	22.14
1946	62,115	11.0	149.65	68.64	39(a)	19.34	39(a)	22.07
1947	51,111	11.0	178.25	82.93	40(a)	20.64	40(a)	23.44
1948	43,237	11.0	203.98	107.38	39(a)	21.17	39(a)	24.44
1949	34,759	11.0	256.46	132.11	37(a)	23.41	37(a)	25.67
1950	21,079	11.0	237.68	114.21	31(a)	22.75	31(a)	25.16
1951	29,322	8.0	285.16	164.52	27(a)	21.74	27(a)	24.27
1952	23,456	8.0	334.68	189.39	25(a)	24.05	25(a)	26.03
1953	39,485	6.0	276.52	122.52	24(a)	22.32	24(a)	25.59
1954	139,159	5.0	190.90	89.18	25(a)	11.71	25(a)	20.64
1955	231,687	4.9	189.36	87.38	41(a)	20.65	26(a)	20.85
1956	166,737	5.3	203.63	84.58	40(b)	23.21	25(b)	22.33
1957	146,843	5.6	201.29	84.98	43(a)	22.29	28(a)	19.64
1958	94,836	6.0	233.48	113.19	44(c)	22.12	30(c)	19.58
1959			288.50	148.94	45(d)	21.74	30(d)	21.79

- (a) Plus Puerto Rico
 (b) Plus Puerto Rico and Alaska
 (c) Plus Puerto Rico, Alaska, Hawaii, and Virgin Islands
 (d) Plus Puerto Rico, Hawaii and Virgin Islands

TABLE VIII

PSOROPTIC SHEEP SCABIES

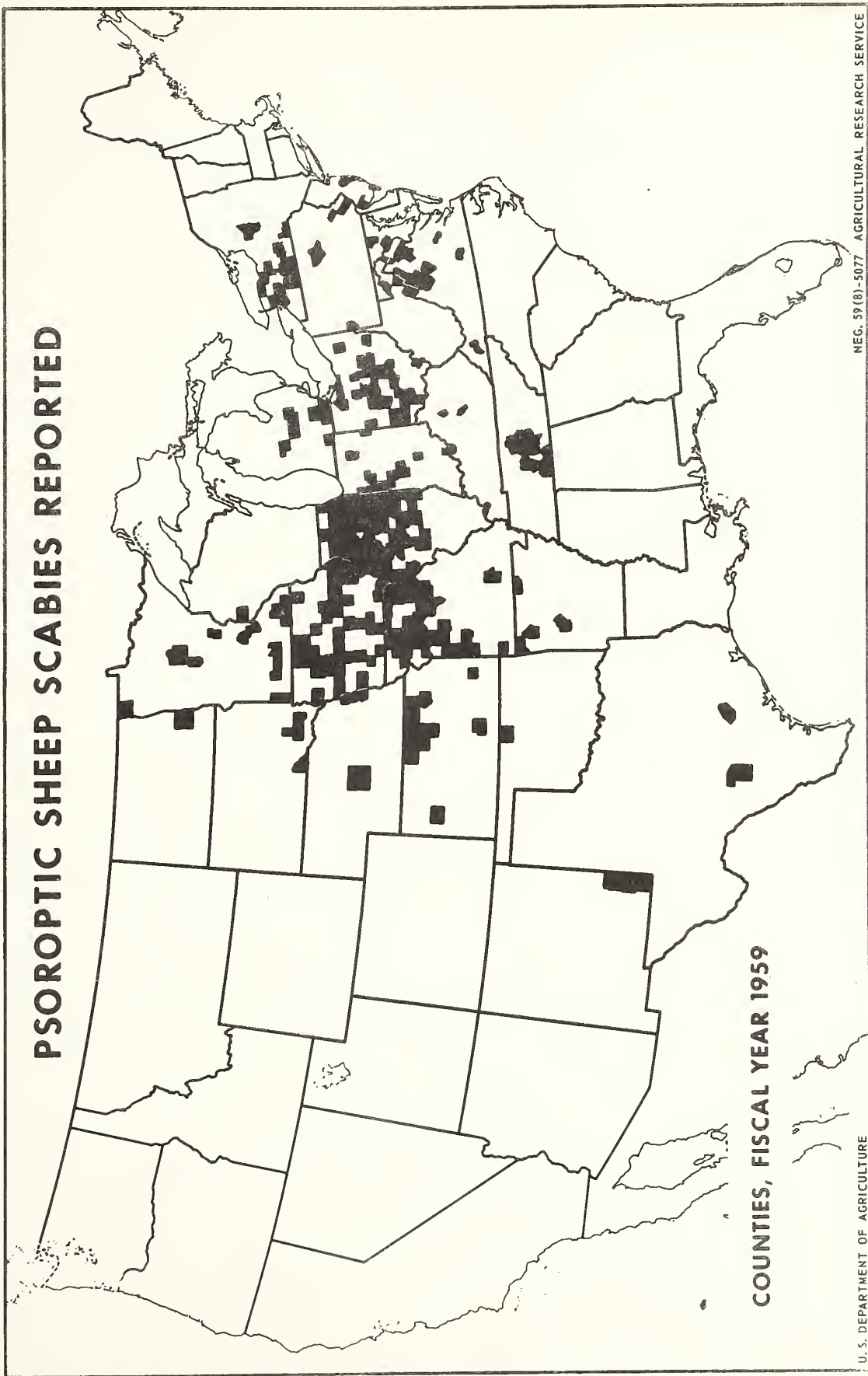
As Reported From Respective States	Number of Infected Counties	Number of Infected Flocks	Number of Infected Sheep	Total Inspections	Total Dippings
Alabama	0	0	0	0	0
Alaska	0	0	0	0	0
Arizona	0	0	0	514,039	0
Arkansas	4	11	1,039	33,734	4,000
California	0	0	0	654,012	0
Colorado	0	0	0	58,955	3,190
Connecticut	0	0	0	0	0
Delaware	0	0	0	602	0
Florida	0	0	0	670	0
Georgia	0	0	0	0	0
Hawaii	0	0	0	0	0
Idaho	0	0	0	43,221	0
Illinois	51	307	21,936	44,176	16,797
Indiana	12	14	683	2,212	639
Iowa	43	94	6,294	24,547	10,032
Kansas	12	30	5,309	48,253	10,343
Kentucky	2	2	152	2,099	1,864
Louisiana	0	0	0	342,596	44,107
Maine	0	0	0	0	0
Maryland	2	4	196	457	522
Massachusetts	0	0	0	0	0
Michigan	8	13	2,324	15,477	7,370
Minnesota	13	21	6,101	6,101	1,070
Mississippi	0	0	0	43,076	515
Missouri	37	83	6,016	27,889	11,839
Montana	0	0	0	0	0
Nebraska	4	5	4,446	5,337	24,825
Nevada	0	0	0	139,093	0
New Hampshire	0	0	0	0	0
New Jersey	3	5	127	10,210	304
New Mexico	1	1	1,690	1,290,647	15,217
New York	11	13	637	637	730
North Carolina	0	0	0	0	0
North Dakota	1	1	1,200	2,700	800
Ohio	30	48	4,996	4,999	5,114
Oklahoma	1	1	235	2,044	470
Oregon	0	0	0	21,627	54
Pennsylvania	4	5	127	1,195	1,027
Rhode Island	0	0	0	0	0
South Carolina	0	0	0	0	0
South Dakota	4	8	411	374,445	5,066
Tennessee	14	31	1,966	26,542	2,142
Texas	3	3	327	6,849,754	132,690
Utah	0	0	0	47,066	0
Vermont	0	0	0	0	0
Virginia	11	25	1,483	2,725	1,512
Washington	0	0	0	59,143	0
West Virginia	4	8	660	25,144	2,241
Wisconsin	1	3	271	428	933
Wyoming	0	0	0	123,094	4,196
TOTALS	276	736	68,626	10,848,946	309,609

Goats inspected in Arizona 5,367; California 204; Arkansas 347,818; Arkansas 1,550;
Total 354,939.

Goats dipped in Texas 2,113.

PSOROPTIC SHEEP SCABIES REPORTED

COUNTIES, FISCAL YEAR 1959



U. S. DEPARTMENT OF AGRICULTURE

NEG. 59 (8)-5077 AGRICULTURAL RESEARCH SERVICE

FIGURE 22

5. Animal disease reporting. The National Report of Animal Diseases was instituted on a monthly basis with the beginning of fiscal year 1959. The first six months' summary of those reports was issued in May 1959, and has met with wide acceptance as a valuable tool in animal disease control and eradication activities.

During fiscal year 1959, the first report on livestock diseases in the United States was submitted for inclusion in World Livestock Disease Report compiled jointly by the Food and Agriculture Organizations of the United Nations and International Office of Epizootics.

6. Cooperative Federal-State screwworm eradication program made significant progress. In fiscal year 1959 sterile screwworm fly production averaged approximately 50 million flies per week and release was conducted over most of Florida and the southern parts of Alabama and Georgia. The native screwworm population had been reduced to a low point in the southeast by the early part of the fiscal year 1959. However, appearance and a population build-up in three counties in southeastern Florida during the winter required intensive efforts on the part of program personnel to bring about the elimination of these infestations.

No screwworms have been reported in Georgia, South Carolina or Alabama since November 1958. With the exception of a single infestation in an animal located in Highlands County on June 17, 1959, Florida has been free of any known screwworm infestations since February 19, 1959. Although a number of cases have occurred in Mississippi recently, near the Mississippi River, intensive survey and spraying operations have been initiated to prevent spread of these infestations. The facilities at Sebring, Florida, for production of flies used in the program were closed in November 1959 and the dispersal of sterile flies in the southeastern States was discontinued.

7. Diagnosis, control and eradication of miscellaneous diseases.

- a. Scrapie eradication continues to be a problem. During fiscal year 1959, scrapie was diagnosed in 11 flocks in Indiana, Wyoming, Kentucky, Illinois, California, Oregon, Ohio, and Wisconsin. Approximately 1,126 flocks and 548,663 sheep are under surveillance as compared with 1,500 flocks and 489,000 sheep in fiscal year 1958. State and Federal scrapie indemnity payments for fiscal years 1958 and 1959 are compared below:

	<u>FY 1958</u>	<u>FY 1959</u>
Federal	\$109,525	\$293,039
State	36,286	113,563

- b. Interest in anaplasmosis control increases. Field trial studies in several Southern States continued with much interest being shown by cooperating State Officials. A rather extensive field trial project was inaugurated in Mississippi during the year to demonstrate the effectiveness of control and eradication measures.

Herds in Hawaii, formerly infected with anaplasmosis, have remained free of the disease on check testing. Controls have been established to eliminate the reintroduction of the disease.

- c. Laboratory services for animal disease eradication regulatory programs expanded. Technical contracts have been made to survey the incidence in the United States of enzootic abortion in ewes and to improve the present complement-fixation test for diagnosing the disease; also to study the epidemiology of leptospirosis and its relationship to the brucellosis program.

Increased efforts were made to standardize laboratory procedures. One means was to send brucellosis check-test samples to all laboratories performing official tests. In addition, four regional workshops for serologists were held in October and November, 1958, in Beltsville, Maryland; Baton Rouge, Louisiana; Provo, Utah; and Ames, Iowa; in order to stress uniformity of laboratory procedures.

At the regulatory laboratory at Beltsville, the desiccation of Brucella abortus Strain 19 and B. abortus Strain 119 cultures was started. These cultures are supplied to commercial companies in this form to produce antigen and vaccine. This method greatly facilitates the shipment of cultures and insures their arrival in a more satisfactory condition for the production of antigen and vaccine. The production of B. melitensis Strain 16 M antigen was begun early in 1959. This antigen is being used by the interim diagnostic laboratory at Ames for investigative work.

- d. Vesicular exanthema of swine. No cases of this disease have been identified for sometime. The last quarantined area has recently been released. The Department announced on October 22, 1959 that the seven year cooperative Federal-State campaign to eradicate the disease was successful. (See Table X).
- e. Foot-and-mouth disease eradication. There have been no known cases of foot-and-mouth disease in Mexico since it was declared free of the disease on December 31, 1954. The operations of the Mexican-United States Commission for the Prevention of Foot-and-Mouth Disease have been greatly reduced and are limited chiefly to field and laboratory investigations of suspected cases of foot-and-mouth disease.

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
ANIMAL DISEASE ERADICATION DIVISION
WASHINGTON 25, D. C.

NATIONAL STATUS ON CONTROL OF GARBAGE-FEEDING

JUNE 1959

State	Premises Feeding Garbage	Number of Swine Fed Garbage	Premises Feeding Cooked Garbage	Number of Swine Fed		Monthly Inspection
				Cooked Garbage	Raw Garbage	
Alabama	408	9,855	408	9,855	0	92%
Arizona	90	8,406	81	8,229	177	99%
Arkansas	257	9,760	250	9,684	76	95%
California	265	178,800	265	178,800	0	100%
Colorado	84	36,041	82	35,988	53	100%
Connecticut	114	16,452	29	4,832	11,620	95%
Delaware	23	1,830	22	1,750	80	100%
Florida	759	46,359	715	44,970	1,389	100%
Georgia	426	28,460	414	28,144	316	100%
Idaho	76	4,955	76	4,955	0	68%
Illinois	177	21,626	177	21,626	0	100%
Indiana	74	8,503	74	8,503	0	98%
Iowa	51	9,325	50	9,075	250	100%
Kansas	196	9,869	194	9,837	32	100%
Kentucky	271	10,234	268	10,173	61	99%
Louisiana	634	12,383	634	12,383	0	100%
Maine	119	10,444	114	10,032	412	61%
Maryland	106	15,263	104	15,220	43	100%
Massachusetts	432	106,476	340	96,923	9,553	96%
Michigan	95	13,724	95	13,724	0	84%
Minnesota	90	13,637	90	13,637	0	100%
Mississippi	94	8,658	84	8,287	371	93%
Missouri	63	12,887	63	12,887	0	90%
Montana	27	4,132	27	4,132	0	100%
Nebraska	46	6,762	46	6,762	0	100%
Nevada	26	3,337	26	3,337	0	100%
New Hampshire	106	8,991	92	8,452	539	61%
New Jersey	277	151,493	275	151,433	60	100%
New Mexico	121	6,320	101	5,896	424	100%
New York	230	33,652	225	33,444	208	100%
North Carolina	607	25,542	607	25,542	0	100%
North Dakota	11	1,018	11	1,018	0	100%
Ohio	304	22,783	304	22,783	0	92%
Oklahoma	424	13,071	419	12,961	110	71%
Oregon	34	7,460	34	7,460	0	100%
Pennsylvania	241	45,445	241	45,445	0	100%
Rhode Island	53	9,666	53	9,666	0	100%
South Carolina	709	17,600	694	17,287	313	87%
South Dakota	31	3,413	31	3,413	0	100%
Tennessee	213	11,161	208	11,115	46	90%
Texas	931	74,076	791	67,517	6,559	76%
Utah	60	6,051	57	5,978	73	100%
Vermont	62	5,010	55	4,418	592	63%
Virginia	398	26,332	398	26,332	0	98%
Washington	79	13,632	76	13,538	94	100%
West Virginia	113	5,376	111	5,283	93	63%
Wisconsin	56	10,590	56	10,590	0	100%
Wyoming	23	1,291	22	1,273	18	100%
TOTALS	10,086	1,108,151	9,589	1,074,589	33,562	27 - 100% 21 less than 100%

95.1 Premises Feeding Cooked Garbage
97.0 Percent of Swine Fed Cooked Garbage
3.0 Percent of Swine Fed Raw Garbage
39 States Reporting 90 to 100 Percent Monthly Inspection

TABLE X

8. Interstate transportation of livestock.

- a. Inspection prevents spread of disease. Livestock at public stockyards come from widely separated areas. Veterinarians and trained livestock inspectors examine for disease all animals that pass through these stockyards. The inspectors also supervise the dipping of cattle and sheep for scabies, and the cleaning and disinfecting of pens, cars and trucks that have contained diseased animals. This inspection offers an excellent opportunity to examine a cross section of the livestock population of the country almost daily at a minimum cost. The spread of disease to other herds and premises is frequently prevented by the prompt application of appropriate sanitary control measures. Instances are not uncommon in which the detection of disease in a shipment at a public stockyard is the owner's first knowledge of the existence of infection on his premises.

- b. The following statistics show the comparative volume of activities at the public stockyards in the fiscal years 1958 and 1959:

	<u>FY 1958</u>	<u>FY 1959</u>
Number of stockyards operating	59	58
Number of cities in which located .	57	56
Animals inspected:		
Cattle	23,817,304	21,977,606
Sheep	11,626,207	11,908,863
Swine	27,474,827	28,926,309
Total animals inspected	62,918,338	62,812,778
Animals dipped for scabies:		
Cattle	609	21,456
Sheep	341,924	388,450
Swine immunized against hog cholera for movement to farms for stocker and feeder purposes	164,471	151,613
Total animals dipped and immunized	507,004	561,519
Health certificates issued for shipments	260,246	275,834
Infectious cars received	955	393
Cars cleaned and disinfected a/ ...	1,538	2,317
Trucks cleaned and disinfected	32,452	34,683
Diseased animals received	352,417	b/434,971

a/ Includes requests by States and railroads.

b/ Includes 91,620 brucellosis, 10,089 tuberculosis and 186 paratuberculosis reactors; and 333,076 other diseased animals.

- c. Twenty-eight Hour Law enforced. The 28-Hour Law is designed to prevent the over-confinement of animals shipped in interstate commerce by common carrier. Waybills and records maintained by carriers and others are examined daily and apparent violations are reported at stations where Federal livestock inspectors are stationed. Inspections are also made from time to time at approximately 900 feed, water, and rest stations in 48 States to determine whether the facilities and equipment are maintained for the safe and humane handling of the species of animals for which they are designed.

During the year the Department received 409 reports of alleged violations of the 28-Hour Law and recommended prosecution of 188 cases. Penalties of \$26,061 and costs were imposed in 229 violations.

- d. Regulatory laws. All reports of violations of the Federal regulations in the interstate movement of diseased animals are fully investigated. During fiscal year 1959, notices of 345 violations of the Animal Quarantine Laws were received. Prosecution was recommended in 236 cases. Disposition was made by the courts of 110 cases, and fines totaling \$15,051 were imposed.

In 53 cases forwarded to the Department of Justice prosecution was not instituted, but letters of warning were sent to the parties involved.

Animal Quarantine:

9. Foreign animal and poultry diseases excluded. During fiscal year 1959, freedom from destructive diseases was maintained through continuing application of appropriate sanitary controls, including inspection and quarantine of imported animals and poultry at ports of entry and careful handling of imported products at ports of entry and at approved destination processing establishments.

Inspections of animal importations at high level. A total of 1,149,815 animal importations were inspected by veterinarians at ports of entry during fiscal year 1959, an increase of 23,281 over fiscal year 1958. Certain animals and poultry were quarantined at designated quarantine stations.

The following table lists the animals, including poultry, inspected and passed for entry during fiscal year 1959.

	Canadian Border Ports	Mexican Border Ports	Air & Ocean Ports	Total	Refused entry
Cattle	613,438	456,792	1,322	1,071,552	17,985
Swine	8,490	-	67	8,557	72
Sheep	33,489	-	-	33,489	1
Goats	38	-	-	38	1
Equines	26,474	7,615	1,861	35,950	3,819
Zoo animals	-	-	229	229	10
Total animals ...	681,929	464,407	3,479	1,149,815	21,888
Poultry	3,264	-	9,318	12,582	1,963

In addition, 2,086 animals (cattle, sheep, swine, goats) were inspected and passed into the U. S. Virgin Islands from the British Virgin Islands for immediate slaughter.

Equines imported from overseas and Mexico, are required to show negative dourine and glanders blood tests. These diseases have been eradicated from the United States. A total of 21,758 serum samples were tested; of these, 202 were positive or suspicious for dourine and 57 positive or suspicious for glanders, a disease which is transmissible to man.

10. Newcastle disease detected in quarantined poultry. An importation of 264 partridges from New Delhi, India was destroyed when the shipment was found to be infected with Newcastle disease. The strain isolated by the diagnostic laboratory was a highly lethal type. Prompt and efficient action at the Department's animal quarantine station at Clifton, New Jersey, prevented spread of the disease to other quarantined poultry.
11. Inspection of imported animal products continues heavy. To prevent the introduction of foot-and-mouth disease, rinderpest, anthrax and other infectious diseases, imported animal products are inspected at ports of entry and shipped under seal to approved destination establishments for processing under supervision. Such importations in fiscal year 1959 included:

Million Pounds

Hides and skins	364.5
Bones and bone meal	141.9
Wool and hair	391.3
Animal casings	12.4
Miscellaneous products	<u>119.0</u>

Total 1,029.1

Railroad cars, trucks, and premises involved in the transportation and handling of restricted products were disinfected.

12. Surveillance maintained at air and ocean ports of entry. The opening of the St. Lawrence Seaway to foreign traffic and air flights from European countries to West Coast ports by the Polar route have presented new problems in maintaining adequate supervision.

During the year, 26,488 pounds (6,138 lots) of prohibited or restricted meats were seized and disposed of when found aboard foreign ships or aircraft or intercepted at entry ports. This is a sharp reduction over similar seizures made last year due in part to an intensive educational program designed to acquaint the traveling public with prohibitions against such materials.

13. Marked increase in inspection of livestock for export. During fiscal year 1959, 22,248 animals were inspected and certified for export to 55 foreign countries, exclusive of Canada and Mexico - an increase of 7,474 over 1958. Accommodations aboard transporting vessels were examined to assure humane handling and safe transport. The greatest demand for livestock from the United States is in high quality breeding cattle (19,019), with approximately 85 percent going to South American countries.

14. Purebred animals certified for duty-free entry. Inspectors at ports of entry identified and issued certificates as to purity of breeding as follows:

	<u>Fiscal Years</u>	
	<u>1958</u>	<u>1959</u>
Horses	721	658
Cattle	23,220	23,218
Sheep	725	542
Swine	105	204
Goats	1	0
Dogs :.....	635	688
Cats	<u>17</u>	<u>6</u>
Total	25,424	25,316

15. Licenses under the Virus-Serum-Toxin Act permitted the production of 125 different biological products as of June 30, 1959. Several products are manufactured in more than one form, so that the total number of biological products was 195. The total number of outlines of production processed during the year was 370. Labels and circulars for licensed biological products reviewed and processed during the fiscal year totaled 2,490 sets, as compared with 2,516 sets in fiscal year 1958. There were 31 permits issued for importation of biological products and 199 for importation or transportation of organisms and vectors.

The progress of the work is reflected in the following table:

Item	F. Y. 1958	F. Y. 1959
Establishments producing anti-hog-cholera serum and hog-cholera virus	24	21
Production (cc):		
Serum (completed product)	586,346,036	618,668,968
Virus:		
Simultaneous	8,452,258	7,488,335
Hyperimmunizing	97,622,584	115,739,804
Inoculating	218,840	582,117
Animal inspections	801,170	906,022
Tests supervised	3,331	3,339
Establishments producing hog-cholera vaccine	21	21
Production (doses)	36,786,739	44,068,354
Establishments producing other biologics	48	48
Production:		
cc	808,669,968	930,487,913
Milligrams	457,075,281	837,040,232
Units	450,315,300	561,830,000
Bulk cc for export	-	517,000
Products destroyed (all kinds)		
cc	17,678,799	18,100,531
Milligrams	22,109,422	22,893,792
Units	172,500	727,000
Export Certificates Issued	741	602

1,740 samples of biological products and sub-cultures of organisms were collected and forwarded to Beltsville laboratories for testing. 1,439 samples of brucellosis vaccine were tested of which 9.5 percent was found unsatisfactory and destroyed. The destroyed vaccine represented 4,892,549 cc., or enough to treat 974,509 calves. 552 purity and safety tests on hog-cholera virus were made; no causative organisms of swine erysipelas were found.

The following table shows the volume of biological products certified for export:

Products*	F. Y. 1958	F. Y. 1959
Anti-hog-cholera serum (cc)	29,168,000	26,225,000
Other serums (cc)	439,000	299,000
Hog-cholera virus (cc)	641,000	733,000
Antitoxins (units)	667,000	525,000
Bacterins	5,244,000	3,821,000
Diagnostics	34,000	-
Vaccines	16,671,000	21,926,000

*Doses, unless otherwise indicated

The number of handlers operating under the Marketing Agreement and Order were as follows:

	F. Y. 1958	F. Y. 1959
Producer-handlers	31	33
Distributor-handlers or equivalent, including wholesale producers and handlers	265	273

MEAT INSPECTION

Current activities: Federal meat inspection assures that meat and meat products will be clean, sound, and wholesome for human consumption, free from adulteration, and truthfully labeled. The work consists of inspection of animals and carcasses at the time of slaughter; inspection at all stages of preparation of meat and meat-food products to assure sanitary handling; destruction of condemned products; administration of humane slaughter law; enforcement of measures that insure informative labeling; inspection of meat and meat-food products offered for importation; and a system of certification to assure acceptance of domestic meats in foreign trade. Meat and meat-food products are examined for compliance with specifications of governmental purchasing agencies; reimbursements are received for the cost of such services. Reimbursements are also received from meat packing establishments for the cost of overtime work performed at their request. Continuous inspection of the manufacture of process or renovated butter is included under this activity.

Selected examples of recent progress:

1. Number of plants demanding Federal meat inspection continues to increase. At the close of the fiscal year 1959, 1,334 plants located in 546 cities were under inspection. Based on current applications for the inspection service and inquiries concerning the inspection requirements, it is estimated that by the end of the current fiscal year there will be an increase of over 3% in the number of plants to be serviced and a 4% increase in the number of cities and towns where inspectors will have to be assigned.

A further increase in fiscal year 1961 is anticipated as shown by the following tabulation:

	<u>At Close of Fiscal Years</u>				
	<u>Actual</u> <u>1957</u>	<u>Actual</u> <u>1958</u>	<u>Actual</u> <u>1959</u>	<u>Esti-</u> <u>mated</u> <u>1960</u>	<u>Esti-</u> <u>mated</u> <u>1961</u>
Number of establish- ments covered	1,244	1,300	1,334	1,380	1,420
Number of cities and towns in which establish- ments were located ...	502	518	546	571	596

Establishments continued to use extra work shifts to speed up production. Many meat packers who previously were satisfied with a local business now have their products inspected so that they are eligible to move freely in interstate commerce. Chain store merchandising and institutional buying by both military and civilian agencies require delivery of Federally inspected meats.

2. Continued activity in meat packing plant renovation and construction. During the fiscal year 1959 there was accelerated activity in the remodeling of meat packing plants and the planning of new plants. Drawings and specifications were reviewed for 1,058 new or remodeled structures. This is the largest number of projects ever handled in a fiscal year. There were 772 projects approved representing approximately \$71,000,000 of construction and 286 projects which were not approved because they did not meet requirements. Included in the approved projects were 51 new establishments in cities where Federal meat inspection was not then maintained. The completion of this construction will result in improving the facilities of the meat packing industry to better service the future livestock economy.
3. Scope of operations. The following tables reflect the scope of operations by fiscal years.

Meat Inspection Activities (in thousands)

	<u>Actual 1957</u>	<u>Actual 1958</u>	<u>Actual 1959</u>	<u>1960</u>	<u>Estimated 1961</u>
<u>Antemortem inspection:</u>					
Animals passed	104,181	97,450	99,272	107,194	107,366
Animals suspected	164	149	143	190	180
Animals condemned	6	4	4	6	4
Total animals inspected	104,351	97,603	99,419	107,390	107,550
<u>Postmortem inspection:</u>					
Carcasses passed for food purposes:					
Entire carcass	97,490	90,894	92,067	99,443	99,596
After removal and condemnation of portions of carcass affected with various diseases and conditions					
Subtotal	6,560	6,445	7,109	7,640	7,700
Carcasses condemned and destroyed for food purposes	104,050	97,339	99,176	107,083	107,296
Total carcasses inspected	295	260	239	300	250
Percentage of carcasses condemned in whole or in part	104,345	97,599	99,415	107,383	107,546
Liver condemnations in cattle and calves:	6.6	6.9	7.4	7.4	7.4
Cattle and calves passed for food purposes included above	27,795	25,125	22,378	22,800	23,200
Number of livers condemned for food purposes	2,992	2,706	2,488	2,508	2,552
Percentage of livers condemned for food purposes	10.7	10.7	11.1	11.0	11.0

Meat Inspection Activities (in thousands) - Continued

Inspection of animals by species: Antemortem inspection (animals)	Actual 1957	Actual 1958	Actual 1959	Estimated	
				1960	1961
Cattle	20,145	18,581	17,322	18,300	18,500
Calves	7,769	6,646	5,140	6,000	6,000
Sheep and lambs	13,919	12,876	12,805	13,800	13,800
Goats	116	171	192	170	170
*Horses	163	126	88	80	80
Swine	62,240	59,204	63,872	69,040	69,000
Total	104,352	97,604	99,419	107,390	107,550
Postmortem inspection (carcasses):					
Cattle	20,142	18,579	17,321	18,298	18,499
Calves	7,768	6,644	5,139	5,998	6,000
Sheep and lambs	13,918	12,876	12,804	13,798	13,799
Goats	116	171	192	170	170
*Horses	162	126	88	80	80
Swine	62,239	59,203	63,871	69,039	68,998
Total	104,345	97,599	99,415	107,383	107,546

*Horses are slaughtered and their meat is identified as such. Their meat is handled and prepared in separate establishments from those handling cattle, calves, sheep, swine and goats.

Meat and Meat Food Products Prepared and Processed Under
Supervision Classified by Type of Product

(in thousand pounds)

	<u>FY 1957</u>	<u>FY 1958</u>	<u>FY 1959</u>
Placed in cure:			
Beef	162,948	158,949	155,122
Pork	3,491,198	3,298,386	3,417,983
Other	1,449	1,166	966
Smoked and/or dried:			
Beef	60,477	53,446	47,773
Pork	2,515,708	2,333,875	2,464,387
Cooked meat:			
Beef	87,705	87,674	86,661
Pork	313,338	295,319	293,721
Other	3,222	3,086	2,604
Sausage:			
Fresh finished	237,881	223,195	245,263
To be dried or semi-			
dried	142,619	134,505	129,012
Frankfurters, weiners	663,400	649,665	649,654
Other	624,880	622,793	623,893
Loaf, headcheese, chile			
con carne	207,542	204,895	203,366
Steaks, chops, roasts	652,392	558,367	541,315
Meat extract	2,243	2,117	2,551
Sliced bacon	980,138	911,016	995,346
Sliced other	201,119	235,205	261,472
Hamburger	221,002	186,463	184,075
Miscellaneous meat products	90,079	114,613	161,251
Lard:			
Rendered	2,050,770	1,863,983	2,040,845
Refined	1,636,910	1,426,331	1,516,963
Oleo stock	84,667	65,708	68,112
Edible tallow	242,140	288,050	347,576
Rendered pork fat:			
Rendered	102,927	92,461	92,508
Refined	51,878	50,937	43,500
Compound containing animal			
fat	688,310	688,083	706,710
Oleomargarine containing			
animal fat	76,049	70,815	85,153
Canned products	2,167,722	2,138,840	2,227,630
Horse meat products:			
Cured	7,072	4,463	1,501
Chopped	15,578	15,107	12,418
Edible oil	--	--	22
Canned horse meat	20,707	12,484	8,832
Total	17,804,070	16,791,997	17,618,185

Meat and Meat Food Products Condemned on Reinspection and Destroyed, Fiscal Year 1959

Cause	Beef	Veal	Mutton and Lamb	Goat meat	Pork	Horse meat	Total
	(pounds)	(pounds)	(pounds)	(pounds)	(pounds)	(pounds)	(pounds)
Tainted, sour or putrid	3,106,732:	52,363:	54,596:	2,731:	4,368,984:	43,323:	7,628,729
Rancid	242,186:	9,022:	2,662:		392,886:	200:	646,956
Molds or foreign odors	564,044:	3,401:	8,401:	754:	572,522:	568:	1,149,690
Unsound canned goods	353,748:	460:	6,469:		239,746:	2,984:	603,407
Unclean or contaminated	7,734,620:	114,561:	135,443:	31,651:	8,095,903:	14,741:	16,126,919
Miscellaneous	102,181:	7,910:	18,628:	40:	234,284:	4,196:	367,239
Total	12,103,511:	187,717:	226,199:	35,176:	13,904,325:	66,012:	26,522,940

Materials Other than Meat Rejected for Use, Fiscal Year 1959

Product	CAUSE OF REJECTION									
	Noncompliance	Odor,	Sour	Unsound	Unaccept..	Misc.	Total			
	with Federal Regulations	Contam-ination	color, or taste:	and/or Moldy goods	canned equip.	(pounds)	(pounds)	(pounds)	(pounds)	(pounds)
Spices and seasoning	5,952	177,454		18,560:		903:	202,869			
Flour and grain	1,365	35,772		1,318:			38,455			
Dairy and eggs	4,527	9,850	529				14,906			
Fruits and vegetables	47,873	132,667	6,500	19,868:	2,814		2,098:	211,820		
Soaps, oils, and cleaners	6,967		17,816	350:						
Equipment	26,044	80	2,000		300					
Equipment, pieces	(5,000)	(476):			(62,564):	(220):	(68,260)			
Casings	625			342:			967			
Curing Agents	800	2,785					3,585			
Miscellaneous	1,616	680					2,296			
Total	95,769	359,288	26,845	40,438:	300	3,001:	528,455			

Examination of Meat and Meat Food Products for Other Government Agencies
(Reimbursable)

<u>Branch of Government</u>	<u>FY 1957</u>	(in thousand pounds)	
		<u>FY 1958</u>	<u>FY 1959</u>
Department of Agriculture:			
Agricultural Marketing Service ...	15,919	3,369	3,231
Commodity Stabilization Service ..	111,112	21,537	19,490
Forest Service	237	237	222
Department of Commerce:			
Civil Aeronautics Administration .	24	5	- -
Maritime Administration	17	- -	- -
Department of the Interior:			
Fish and Wild Life	167	153	147
Bureau of Indian Affairs	158	436	1,082
Department of Health, Education and Welfare:			
Public Health Service	2,412	2,408	2,354
Department of Justice:			
Bureau of Prisons	131	130	142
Department of the Army	204,148	183,932	163,581
Coast Guard	22	6	23
Marine Corps	17	2	- -
Department of the Navy	229,848	220,572	164,876
General Services Administration	784	267	169
Veterans' Administration	30,290	30,630	27,813
Total	a/595,286	b/463,684	c/383,130

- a/ Includes 4,323 thousand pounds rejected.
b/ Includes 2,778 thousand pounds rejected.
c/ Includes 3,740 thousand pounds rejected.

Summary of Samples Examined in Laboratories for Determination of
Adulteration or other Objectionable Conditions, Fiscal Year 1959

	<u>Number Examined</u>	<u>Reported Adversely</u>
Meat and meat food product	24,866	3,796
Edible fats and oils	519	15
Binders (cereal, dried skim milk, soya flour)	1,834	28
Seasonings (spices, flavorings)	9,108	90
Curing materials	2,664	34
Miscellaneous	4,106	333
Imports	3,083	108
Total	46,180	4,404

Examinations of Labels and Sketches

	<u>FY 1958</u>	<u>FY 1959</u>
Number of labels and sketches approved	39,565	37,923
Number of labels approved for imported meat	1,116	1,240
Number of labels and sketches refused approval ...	<u>3,247</u>	<u>3,316</u>
Total number of labels and sketches reviewed ..	43,928	42,479

Inspection of Imported Meat and Meat Food Products

<u>Fiscal Year</u>	<u>Pounds</u>
1957	361,569,278
1958	477,506,265
1959	945,227,733
1960 (est.)	700,000,000

4. Specimens of diseased tissue examined. During the past year 2,416 examinations of questionable material were made at the suggestion of inspectors. These included histopathological diagnoses, biological assays, serological identifications, bacteriological evaluations and parasite viability determinations. A wide variety of pathological conditions were diagnosed. Many tests were also made to assure safety and acceptability of control procedures. Examinations by fiscal years follow.

<u>Fiscal Year</u>	<u>Number</u>
1957	1,657
1958	2,518
1959	2,416

5. Exemption certificates issued to retail dealers and butchers. A retail dealer or butcher who holds a certificate of exemption may ship or transport interstate meat and meat food products not bearing the mark of Federal Meat Inspection.

During the 1959 fiscal year 104 certificates of exemption were issued and 162 were cancelled. At the end of the fiscal year 609 exemption certificates were in effect.

6. Work started on the development of humane slaughter methods. Shortly after passage in August 1958 of the act establishing the use of humane methods of slaughter of livestock as a policy of the United States, steps were taken to give effect to the new law. On February 27, 1959, the Secretary announced four methods of slaughter considered to be humane as recommended by the Federal Meat Inspection Service and the Humane Slaughter Advisory Committee. Each designation contains a description of the livestock handling methods to be used for each species. In developing the designations, field investigations were conducted in the United States and Canada; consultations were held with physiologists in the human and animal fields; and literature pertaining to the animal nervous systems was reviewed.

(b) Salaries and Expenses (Special Foreign Currency Program)

Allocations of foreign currencies, 1960 and base for 1961	\$12,056,500
Budget Estimate, 1961	15,131,500
Increase	<u>+3,075,000</u>

Note: The 1961 Budget Estimates include for the first time a proposal for the appropriation, "Salaries and expenses (Special foreign currency program), Agricultural Research Service", which would provide funds for the purchase of foreign currencies derived from sales under Title I of the Agricultural Trade Development and Assistance Act of 1954, as amended, (P.L. 480) for the purposes of market development research (section 104(a) and agricultural and forest research (section 104(k)).

Previously, the funds for these purposes have been derived as follows:

- a. Requests for allocations to use foreign currencies for the purposes of market development research under section 104(a) have been reviewed and approved by the Bureau of the Budget.
- b. Allotments of funds for the purposes of agricultural and forest research under section 104(k) have been made from the \$5.1 million appropriation provided in the Supplemental Appropriation Act, 1959 (P.L. 85-766), approved August 27, 1958, to the account "Funds Appropriated to the President" for use in purchasing foreign currencies to conduct scientific activities abroad and to provide translation services as authorized by section 104(k).

The Project Statement which follows has been prepared on the basis of available funds, and reflects obligations incurred in 1959 and estimated in 1960 and 1961.

SUMMARY OF INCREASES AND DECREASES, 1961
(On basis of available funds)

Decrease for market development research under section 104(a) of Public Law 480	-14,939,531
Increase for agricultural and forest research under section 104(k) of Public Law 480	+8,153,200

PROJECT STATEMENT
(On basis of available funds)

Project	:	1959	:	1960 (estimated)	:	Increase or decrease	:	1961 (estimated)
1. Market development research (sec. 104(a))	:	\$1,651,828	:	\$18,029,531	:	-\$14,939,531(1)	:	\$3,090,000
2. Agricultural and forest research (sec. 104(k))	:	1,700	:	3,888,300	:	+8,153,200(2)	:	12,041,500
Total obligations or estimate a/	:	1,653,528	:	21,917,831	:	-6,786,331	:	15,131,500

Project	1959	1960 (estimated)	Increase or decrease	1961 (estimated)
Comparative transfer from other accounts	-1,700:	-3,838,300:		
Unobligated balance brought forward	-28,516:	-5,973,031:		
Unobligated balance carried forward	5,973,031:	- -		
Authorization to expend foreign currency receipts .	-7,596,484:	-12,056,500:		
Adjustment due to changes in exchange rates	141:	- -		
Total appropriation	- -	b/ - -		

a/ Comparable applied costs are \$219,895 in 1959, \$3,580,000 in 1960, and \$8,400,000 in 1961. Differences between costs and obligations are due primarily to the excess of foreign currency grants and contracts made over work completed in each year.

b/ An appropriation is recommended for 1960 equal to the dollar value of unexpended balances of previous foreign currency allocations under section 104(a) as of June 30, 1960, as indicated below under "Explanation of Language".

Basis of Estimate

All overseas agricultural and forestry research utilizing foreign currencies under sections 104(a) and (k) of P.L. 480 supplements and complements that financed by regular dollar appropriations available to the Department. The foreign projects do not duplicate or displace the domestic scientific research activities of the Department or of its cooperators, nor will they reduce the need for regular dollar appropriations for research.

The principal criteria which are applied to research conducted with foreign currencies are as follows:

1. Research projects are primarily of benefit to American agriculture. Usually they are mutually beneficial to both countries.
2. Research is undertaken in institutions having highly trained scientific personnel with specialized experience, techniques, facilities, or environmental conditions or material which permits them to conduct certain work more rapidly or efficiently than can be done in this country, or to attack problems upon which the Department has been unable to proceed.
3. Research is undertaken in both applied and basic fields; however, it is expected that a majority of the work will be of a fundamental or basic nature.
4. Projects, which may extend up to five years, are fully financed and totally obligated when agreements are executed. Payments are made in increments as the work progresses.

5. Initial arrangements are made through the Department of State and the Agricultural Attaches of the Foreign Agricultural Service of the Department of Agriculture on projects to be conducted abroad. Prior to executing any research agreement, the Department also consults with the Agricultural Attaches and Heads of Missions to insure that conduct of the proposed projects would be consonant with the foreign policy of the United States.

Before a project can be initiated, it is necessary (a) to conduct surveys to explore the possibilities for research which can be undertaken in foreign countries to the benefit of American agriculture; (b) for the foreign institution to develop a project proposal; (c) for Department of Agriculture scientists to review the project proposal and make necessary revisions in it; (d) to negotiate the final arrangement and the estimated amount of funds which will be required for the life of the project; and (e) to secure the approval of both parties to the agreement. Such arrangements necessarily take some time and may involve considerable effort before the final agreement is reached and the funds actually obligated. The ability to obligate funds by a specific date prior to the end of a fiscal year cannot be determined precisely in advance. In order that such preliminary work will not be wasted, the proposed appropriation language provides that unobligated amounts as of the end of the fiscal year shall continue available until expended.

The estimates for 1961 are based on extensive surveys in foreign countries and review by the Department of projects submitted by foreign institutions. A full justification of the 1961 estimates is given in the following section.

INCREASE OR DECREASE

The net decrease of \$6,786,331 estimated in the obligations of foreign currencies which accrue under Title I of the Agricultural Trade Development and Assistance Act of 1954, as amended, consists of:

- (1) A decrease of \$14,939,531 in obligations for market development research under section 104(a).

Utilization and marketing research conducted under section 104(a) of P.L. 480 are important tools in the development of new uses for commodities of importance to American agriculture, particularly surplus commodities, thus aiding in the expansion of markets for such commodities. The reduction in 1961 from amounts available in 1960 is proposed because the capacity of the foreign institutions to take on additional projects in 1961 will be reduced due to continuing work on projects approved from currencies made available in 1960 and prior years. Since the research contracts and grants provide for work which foreign institutions agree to do over a period of up to five years, many institutions will be working during 1961 on previously approved projects.

A recent amendment to P.L. 480 provides that particular regard shall be given, in agreements with foreign countries relating to the sales of surplus agricultural commodities, to providing for the convertibility of such amount of the proceeds as may be needed to carry out the purposes of section 104(a) in those countries which offer reasonable potential of becoming dollar markets for

United States agricultural commodities. It is estimated that as much as \$1,251,500 of the Budget Estimate of \$3,090,000 for 104(a) purposes might be made available through conversion in so-called "hard currency" countries, especially Japan, The Netherlands, Sweden, West Germany, and the United Kingdom.

Surveys have shown that the projects which could be undertaken in fiscal year 1961 may include, but would not be limited to the subject matter fields described below.

Utilization research. In this field projects will deal with fundamental problems and will be designed to provide the groundwork for future applied research. Emphasis will be placed upon investigations of the composition of the various commodities and upon the relationship of that composition to processing problems. Research would be conducted on such subjects as:

1. Cereal Grains: (a) The development of new industrial uses for cereal starches and proteins through chemical conversion to tanning agents, plastics, protective coatings, and similar substances. (b) Biochemical conversion of cereal grain products into polymers useful as gums, sizing agents, films, and fibers. (c) Fermentation of grains and grain products to produce industrial enzymes, organic acids, and other products. (d) Development of improved milling methods for the economic separation of grains into fractions useful in food and industrial applications.
2. Cotton: (a) Chemical and mechanical modification of cotton fibers and textiles to meet various industrial and household requirements. (b) Determination of the effects of additive resin finishes and attendant mechanical treatments upon such fabric characteristics as resilience, crease-resistance, elasticity, draping, and non-soiling properties.
3. Fats and Oils, and Oilseed Proteins: (a) Chemical conversion of vegetable oils to intermediates suitable for large-volume use in plastics, lubricants, and rubberlike materials. (b) Chemical conversion of inedible animal fats to synthetic resins, plastics, plasticizers, detergents, emulsifiers, water-repellent modifiers, lubricants, and other industrial products. (c) The development of methods for producing new, highly-stable edible fats having a wide range of physical properties and market applications. (d) Research to increase the use of oilseed proteins in foreign foods and rations for animal feed.
4. Dairy Products: The development of new or improved food products (such as milk concentrates, milk powders, and cultured butter) that will reduce perishability or the need for constant refrigeration--without the sacrifice of nutritive value and flavor.
5. Hides and Leather: The development of new and more economical methods for preservation, modification or tanning of hides to produce leathers of improved properties and increased consumer acceptance.

6. Meat: (a) The development of new methods for meat processing that will increase tenderness, preserve flavor, and result in greater utilization of lower-grade carcasses and less desirable cuts. (b) Research on new methods of producing frozen meats and meat products to improve quality.
7. Sugar Crops: (a) Chemical research on sugar and sugar derivatives to form new high-molecular-weight compounds of value as industrial intermediates. (b) The development of processes for the conversion of beet and cane sugar into organic acids having large-scale industrial applications.
8. Wool: (a) The development of wool garments that are shrink-resistant, colorfast, easier to clean and to dry--all without sacrificing the desirable appearance characteristics of present wool fabrics. (b) The development of chemical or mechanical methods of improving the quality of fabrics made from coarse domestic wool.
9. Fruits and Vegetables: Research to find new methods for the production of processed fruit and vegetable products retaining fresh product quality characteristics.
10. Tobacco: The development of improved tobacco products through identification of the chemical factors that influence the quality of tobacco and tobacco smoke.

Marketing research. In this field, projects would be undertaken on but not limited to:

1. U.S. Grade Standards: Evaluating U. S. grade standards to determine the extent to which they reflect quality characteristics desired by importers of U. S. agricultural products.
2. Quality Maintenance and Improvement: Information on physiological, pathological, and insect problems which arise during the transportation, storage, wholesaling, and retailing of United States agricultural products sold in foreign markets.
3. Quality Evaluation: Improved techniques for identifying and measuring product quality by physical, chemical, and electronic devices and procedures. Such techniques are needed in developing grades and standards for agricultural products marketed abroad and for determining whether these products conform to such grades and standards.
4. Basic Factors Regarding Food Preferences: Basic research into psychological factors conditioning eating preferences and rejection levels for given foods. Sound information in this area would be of considerable value in the development of foreign and U.S. markets in that it would provide additional insight into and understanding of the role food plays for individuals and their families.
5. Packaging: Packages used for marketing local and imported agricultural products to determine resistance to mechanical damage, appearance, and effect on packaged product. This information would reveal amount and causes of package failure in U.S. exports and suggest new improved types of package for trial.

6. Market Organization: In cooperation with Foreign Agricultural Service, obtain information on foreign market organization, structure, costs, margins, and practices of value to American firms seeking markets abroad.

(2) An increase of \$3,153,200 in obligations for agricultural and forest research under section 104(k).

Section 104(k) of P.L. 400 authorizes agricultural and forestry research which can be conducted by foreign institutions. Since market development research is conducted under section 104(a) as indicated above, all other research with foreign currencies is carried out pursuant to section 104(k).

The Budget Estimate of \$12,041,500 for fiscal year 1961 is based upon surveys in foreign countries and the review of project recommendations submitted by foreign institutions.

The projects which would be undertaken under this authorization would include, but not necessarily be limited to the subject matter fields described below.

Farm Research

1. Studies of diseases and parasites that attack livestock in other countries and are of potential hazard to the livestock of the United States.
2. Studies of foreign plant diseases so as to be able to combat them if and when they reach the United States.
3. Studies of foreign insects which might safely be used in the United States to control undesirable plants.
4. Studies of foreign insect pests that are already present or likely to become established in the United States, with emphasis on biological control (i.e., control by parasites, predators, and diseases).
5. Exploration for crops in foreign countries that may be used as new crops in the United States or serve as sources of new gum plasm.
6. Studies of the physiology of plants of economic importance.
7. Studies of the basic nature of soils and of how to restore worn out soils to a productive level.
8. Studies of the economics of farming under different situations as a guide to improve the efficiency of U. S. farming.

9. Studies of basic nutritional and physiological problems of domestic animals.
10. Studies of agricultural engineering problems to aid in improvement of U. S. farm machinery or buildings.

Agricultural Utilization Research

Utilization research under Section 104(k) would be primarily concerned with compositional and other studies of native plants used for food and other purposes that might be suitable for introduction into the United States to replace crops now in surplus. Studies of native varieties of plants also growing in the United States, such as soybeans, rice, and certain fruits and vegetables, might lead to expansion of outlets for U. S. production of these crops.

Human Nutrition Research

1. Research to obtain better understanding of the normal biological variation in human nutritional requirements involving coordinated investigations into the biochemical response to a given reference diet by human subjects of different environmental and genetic backgrounds. These studies would enable more rapid progress in determining human food requirements and in appraising the influence of nutritional state and the nature of components of customary diets on these requirements. These studies might also reveal the existence of now unrecognized nutritional substances essential to health and longevity.
2. Comparative studies of human nutrition conducted in different parts of the world under widely differing conditions of food habits and food supplies would provide scientific information on food requirements which is unattainable under USA conditions. Attention would be centered first on the influence different types and amount of major energy-yielding components of the diet have on nutritional response.

Agricultural Marketing Research

1. Basic studies on the relation of physiological changes in fruits and vegetables during storage to spoilage by microorganisms.

2. Development of machine for automatic computation and recording of Pressly strength data of cotton fibers.
3. Development of rapid methods for chemical analysis of fungicide and insecticide residues on agricultural commodities.
4. Studies of grain pressures and loads on bin floors and walls which would be useful in design and construction of modern grain storage structures.
5. Basic study on relation of fumigant residues in poultry feed to egg production and size of eggs.

Forestry Research

1. Research on the chemistry of lignin and cellulose in wood, leading to a better understanding of its potential uses.
2. Research on the physiology of the flowering and seed maturation process in forest trees, self-pollination and incompatability, and the relation of nutrition to flower formation and seed production.
3. Studies of the physical and chemical properties of forest soils in relation to land management practices, including studies of soil hydrology and effects of freezing, and the degree to which soil physics and chemistry can be altered.
4. Principles of combustion of fire burning fuels applicable to forest fires.
5. Studies of the susceptibility of forest tree species native to the United States to insects and diseases common to foreign countries, and of the parasites, predators and diseases of injurious forest insects that have been introduced into the U. S. from abroad.

EXPLANATION OF LANGUAGE

The estimates include new appropriation language as follows:

1. For purchase of foreign currencies which accrue under Title I of the Agricultural Trade Development and Assistance Act of 1954, as amended (7 U.S.C. 1704), for market development research authorized by section 104(a), and for agricultural and forestry research authorized by section 104(k) of that Act, to remain available until expended, \$15,131,500,
2. of which not less than \$7,662,500 shall be available to purchase currencies which the Treasury Department shall determine to be excess to normal requirements of the United States:
3. Provided, That this appropriation shall not be used for the purchase of currencies available in the Treasury for the purposes of section 104(f) of such Act unless such currencies are excess to the normal requirements of the United States:
4. Provided further, That the dollar value of the unexpended balances, as of June 30, 1960, of allocations of foreign currencies heretofore made available to the Agricultural Research Service for the foregoing purposes of section 104(a) is appropriated as of that date and shall be merged with this appropriation.

This language provides an appropriation for the purchase of foreign currencies to carry out research under sections 104(a) and 104(k) of Title I of P.L. 480, as amended. The four major provisions of the new language are indicated below.

1. The first portion of the language provides for appropriation of dollars to purchase foreign currencies which accrue under Title I of the Agricultural Trade Development and Assistance Act of 1954, as amended (P.L. 480). The dollars will be credited to the Commodity Credit Corporation to offset, in part, its costs of financing P.L. 480 shipments. The amounts requested by major activities are as follows:

Market development research (sec. 104(a)) ...	\$3,090,000
Agricultural and forestry research	
(sec. 104(k))	<u>12,041,500</u>
Total estimate	<u>15,131,500</u>

Since funds are intended almost exclusively for contracts or grants with foreign countries and it is possible that final details of negotiations might not be completed by June 30, the proposed language provides that the funds would remain available until expended. Inability to complete agreements which might be in final stages of negotiation would be embarrassing and might jeopardize negotiations on further lines of work.

Foreign currencies previously utilized by the Agricultural Research Service were obtained by Bureau of the Budget allocations of authorizations to expend foreign currency receipts under section 104(a) or as allotments of dollars from the appropriation, "Funds appropriated to the President" to purchase foreign currencies for section 104(k) purposes.

2. The language provides that not less than \$7,662,500 of the total estimate must be used only to purchase currencies which the Treasury Department determines to be excess to normal requirements of the United States. The 1961 Budget Estimates assume that six countries are in this excess category--Egypt, India, Israel, Pakistan, Poland, and Yugoslavia. During 1961 and future years, actual excess currency countries will be designated by the Treasury Department.

The minimum of \$7,662,500 on the use of excess currencies is distributed by country as follows:

<u>Country</u>	<u>Amount</u>
Egypt	\$202,000
India	2,210,000
Israel	1,220,000
Pakistan	930,000
Poland	2,051,000
Yugoslavia	<u>1,049,500</u>
Total	<u>7,662,500</u>

3. The language provides that none of the appropriation may be used to purchase currencies available under section 104(f) unless they are excess to normal requirements of the United States. ("Section 104(f) currencies" are available to pay any United States obligations abroad.) This provision prohibits the use of 104(f) currencies for paying obligations under sections 104(a) or 104(k) in any country where they are not available in excess of "normal" U.S. requirements as determined by the Treasury Department. The purchase of section 104(f) funds for the general purposes of the Agricultural Research Service under this appropriation is not authorized, but regular "Salaries and expenses" dollar funds could be so used. There are no plans at present to utilize 104(f) funds for 104(a) or (k) purposes.
4. Finally, the language provides that the dollar value of unexpended balances, as of June 30, 1960, of foreign currency allocations made prior to that time would be merged with this appropriation as of that date. This would simplify the program and accounting records by providing for the use of dollars to purchase all foreign currencies expended under sections 104(a) and (k) in 1961 and subsequent years. The unexpended balance to be transferred is presently estimated at \$17.6 million.

STATUS OF PROGRAM

1. Authority: In fiscal year 1958, the Department, through the Agricultural Research Service, initiated a research program abroad utilizing foreign currencies arising from the sale of surplus agricultural commodities under Title I of Public Law 480. At first the program was confined to market development research authorized by Section 104(a) of P.L. 480. Later, the Supplemental Appropriation Act, 1959 (P.L. 85-766), approved August 27, 1958, appropriated \$5.1 million to the account "Funds Appropriated to the President" for use in purchasing foreign currencies to conduct scientific activities abroad and to provide translation services as authorized by Section 104(k) of P.L. 480. Under this appropriation, \$3,890,000 has been allotted to the Department for the conduct of farm, forestry, marketing and home economics research in foreign countries.

2. Administration: The Foreign Research and Technical Programs Division of the Agricultural Research Service has been assigned responsibility for administering and supervising research activities overseas financed from foreign currencies available to the Department. Since the research abroad relates to research in the Department conducted by the Agricultural Research Service, Agricultural Marketing Service, and Forest Service, a Policy and Program Development Board has been established consisting of Agricultural Research Service's Director of the Foreign Research and Technical Programs Division; the Deputy Administrators of Farm Research and Utilization Research, ARS; the Deputy Administrator for Marketing Research, Agricultural Marketing Service; the Assistant Chief for Research, Forest Service; and the Deputy Administrator of Foreign Agricultural Service. This board develops policy and decides upon broad research program matters. Research proposals from foreign institutions are reviewed and appraised for technical adequacy and benefits to the United States in ARS, AMS, or FS by the research divisions concerned with the subject matter of each proposal. The Department's Central Project Office is utilized to achieve coordination and avoid duplication with research undertaken by the Department in the United States.

In addition to the Washington staff, a small European regional office in Rome, Italy, reports to the Director of the Foreign Research and Technical Programs Division. This Rome office is responsible for the negotiation and administration of the utilization, farm, forestry, and marketing research projects in the several European countries and in Israel.

With the development of research projects abroad in countries of the Far East and South America, consideration is being given to the establishment of a regional office in the Far East, and another in South America, with responsibilities in their geographic areas similar to those of the Rome office.

Agreements for research projects undertaken by foreign institutions specify the duration of the project, which may be up to five years. Funds covering the cost of the project for its entire life are obligated at the time the agreement is made. Actual payments to the

foreign institution are made in increments or are based upon performance as specified in the agreement.

To the maximum extent possible, the costs of administering the program are paid from foreign currencies. Foreign travel and other operating costs of Departmental officials who make surveys in foreign countries to determine the potentials for worthwhile research projects, conduct the final negotiations for initiating a project, or inspect progress of the research projects are paid from foreign currencies. In addition, all possible expenses of the regional office at Rome, Italy, have been paid from foreign currencies, including salary costs of foreign nationals. The U. S. dollar costs of administering the program have been kept as low as possible. Such costs consist primarily of the salaries of the employees in Washington, D. C., and the Rome office directly responsible for the operation of the program. For fiscal year 1959, direct administrative costs of the program were as follows:

Payable from foreign currencies	\$70,460
Payable from U.S. dollar appropriations to the Department (Salaries and expenses, ARS; marketing research and service, AMS; and forest protection and utilization, FS)	107,297
Total	<u>177,757</u>

While these costs approximate 10% of the total program obligations incurred in fiscal year 1959, they include a substantial amount of developmental work for projects being obligated in 1960. It is anticipated that the relation of administrative costs to total program obligations will be substantially less in subsequent years. Also it is anticipated that in future years a larger portion of the administrative costs will be paid from foreign currencies. Dollar costs in 1960 and 1961, respectively, will be somewhat higher than in 1959 because of the expansion of the total program.

3. Surveys: Since the inception of the program in 1958, six surveys of agricultural research potential have been made - three in Europe, two in the Far East and one in South America. These surveys have been made in order (a) to determine the availability of scientific manpower and facilities that could be devoted to agricultural or forestry research without disrupting internal research programs in countries where foreign currencies are available, (b) to determine the interest of scientific institutions in a cooperative program of research with U. S., and (c) to invite the submission of research proposals by these institutions and also to seek to interest the institutions in proposals emanating from the Department of Agriculture.

Prior to undertaking a survey, a message is sent to each diplomatic mission or principal post in the country, outlining the program and suggesting the institutions and people with whom discussion is desired. The views of the post concerning the program and concurrence to make a survey is requested. Provisions of the existing State-Agriculture agreement as well as other appropriate regulations governing inter-agency relationships abroad are applicable to the program.

4. Project Proposals: As a result of the several surveys of research potential, 207 research proposals from six countries in Asia, 466 from seven countries in Europe and 223 from six countries in South America have been submitted for appraisal and evaluation. The total for all countries is 896, of which approximately 46 percent are in the field of agricultural utilization research, 36 percent in farm research, 14 percent in forest research and 4 percent in marketing research.

5. Status of Agreements: As of January 1, 1960, 30 agreements have been executed. Three have been made with research institutions in Israel, five in Finland, twenty in United Kingdom, and two in Italy. In addition, final documents are being prepared for 20 agreements with research institutions; two in Israel, four in Finland, three in United Kingdom, four in Italy, five in Spain and one each in Turkey and Pakistan. Further negotiations have recently been completed in foreign countries and final documents will be prepared on 78 additional research projects as follows:

France	1
Finland	20
India	12
Israel	10
Pakistan	5
Poland	26
Spain	4
	<u>78</u>

The average obligation for a research project has approximated \$70,000.

6. Examples of Projects: Some examples of projects for which agreements have been made or negotiated are as follows:

Utilization research (Section 104(a)):

Finland

Fundamental studies of the transmission of flavor constituents and other biologically-active compounds from the feed of dairy cattle to milk, to obtain information useful in the development of means for minimizing such transport.

Biochemical Institute, Helsinki.

Project approved November 6, 1958. Executed May 5, 1959. Duration: 5 years.

Amount: 80,741,500 finnmaks (\$253,108 equivalent).

Israel

A fundamental study of the oxidation of cotton by hypochlorite, hypobromite, and other oxidizing agents, to obtain data on the kinetics of the oxidation and the changes in physical and chemical properties, as a contribution to improved uses for cotton.

Institute for Fibres and Forest Products Research, Jerusalem.

Project approved June 18, 1958. Executed June 27, 1958. Duration: 5 years.

Amount: 236,325 Israeli pounds (\$131,292 equivalent).

Fundamental studies on the mild oxidation of cereal grain starches by hypochlorite, hypobromite, hypochlorite-bromide mixtures, and other oxidizing agents for the determination of reaction mechanisms and the physical and chemical properties of the modified starches of importance to the production and use of this class of industrial starches.

Institute for Fibres and Forest Products Research, Jerusalem.

Project approved June 18, 1958. Executed June 22, 1958. Duration: 5 years.

Amount: 232,215 Israeli pounds (\$129,008 equivalent).

United Kingdom

A fundamental investigation of the causes of warp breakage in the weaving of cotton yarns, as a basis for improving quality and reducing costs of production.

British Cotton Industry Research Association, Shirley Institute, Didsbury, Manchester.

Project approved June 18, 1958. Executed July 8, 1958. Duration: 5 years.

Amount: 37,210 British pounds (\$104,188 equivalent).

A basic investigation of the biochemical and physical changes occurring in meat fibres when they are dehydrated by the "accelerated freeze-drying" process, to determine conditions necessary for its commercial acceptance.

Ministry of Agriculture, Fisheries and Food, Scientific Adviser's Division (Food), Research Establishment and Experimental Factory, Aberdeen, Scotland.

Project approved June 18, 1958. Executed July 8, 1958. Duration: 5 years.

Amount: 45,555 British pounds (Equivalent at time of execution \$127,554).

Application of paper chromatography and allied techniques to differentiation of the microorganisms important in dairy products, in order to obtain data useful in the scientific control of manufacturing procedures for producing dairy products of improved quality.

National Institute for Research in Dairying (University of Reading) Shinfield, Reading, England.

Project approved October 27, 1958. Executed May 7, 1959. Duration: 5 years.

Amount: 31,751 British pounds (\$89,039 equivalent).

Agricultural and Forest Research (Section 104(k))

Finland

The role of mycorrhizae in tree nutrition and growth, and the possible association of abnormal mycorrhizae with tree disease.

University of Helsinki, Helsinki, Finland.

Project executed October 23, 1959. Duration: 5 years.

Amount: 12,870,000 finnmaks (\$40,383 equivalent).

Israel

Screening of collections of cultivated barleys and related species for resistance to barley disease pathogens as a source of new breeding material.

Hebrew University, Agricultural Experiment Station, Biet Dagan, Israel.

Negotiated November, 1959. Duration: 5 years.

Agreement to be executed for 169,251 Israeli pounds (\$94,028 equivalent).

Pakistan

Control of Khapra beetle as a means of reducing grain losses in storage.

Department of Plant Protection, Ministry of Food and Agriculture, Karachi, Pakistan.

Negotiated November, 1959. Duration: 5 years.

Agreement to be executed for 373,722 rupees (\$79,095 equivalent).

Poland

Nature of plant resistance to nematode, as a means of reducing crop losses.

Institute of Plant Protection, Pogman, Poland

Project negotiated November, 1959. Duration: 5 years.

Agreement to be executed for 475,000 zlotys (\$8,309 equivalent).

Secretion of Anterior Pituitary Hormones and Ovulation in Small Remnants.

Institute of Animal Physiology, Academy of Science, Warsaw, Poland.

Negotiated November, 1959. Duration: 5 years.

Agreement to be executed for 632,350 zlotys (\$11,497 equivalent).

Spain

Parasites, predators and diseases of gypsy moth as a means of developing control methods.

Institute of Forest Research, Madrid, Spain.

Project negotiated November, 1959. Duration: 5 years.

Agreement to be executed for 2,456,000 pesetas (\$40,933 equivalent).

Turkey

New crops screening of native plants of Turkey of potential use in the agricultures of United States and Turkey.

University of Ankara, Department of Agronomy, Ankara, Turkey.

Project approved October 22, 1959. Duration: 5 years.

Amount: 1,210,000 Turkish lira (\$134,069 equivalent).

(c) Construction of Facilities

Appropriation Act, 1960 and base for 1961	- -
Budget Estimate, 1961	<u>\$900,000</u>
Increase (to replace present facilities used for entomology research at Orlando, Florida)	<u>+900,000</u>

PROJECT STATEMENT

Project	:	1959	:	1960	:	1961
	:		:	:(estimated)	:	:(estimated)
Construction of facilities for entomology research	:	- -	:	- -	:	a/ \$900,000(1)

a/ Represents obligations. Applied costs are \$60,000. The difference of \$840,000 is, primarily, the excess of construction contracts estimated to be made over work estimated to be performed in 1961.

INCREASE

(1) Increase of \$900,000 to replace present entomology research facilities at Orlando, Florida.

Relocation of Laboratory: The present facilities for entomology research at Orlando, Florida, are located on about 19 acres of land transferred to the Department of Agriculture under authority of the 1960 Department of Agriculture Appropriation Act. Because of its high commercial value and the intensive use of adjacent land for business purposes the House Committee on Appropriations requested in House Report No. 365, page 12, that the Department select possible alternative locations for the laboratory and submit its recommendations to the Committee.

A number of communities in Florida have urged the relocation of the laboratory in their own community, and offers of land in or near such communities have been tendered as sites for the laboratory. Officials of the Department have considered these various alternative locations and have inspected alternative sites. As a result of this review, it is recommended that the laboratory be located at Gainesville, Florida. The reasons for selecting a site on the campus of the University of Florida at Gainesville, instead of Orlando which is considered second in order of priority, are the availability at the University of:

(a) Excellent library facilities for reference and research.

(b) Entomologists and other scientists of the University, Experiment Station, and Extension Departments for consultation and cooperation.

(c) Special courses of study to prepare junior members of the staff for more advanced work.

(d) Undergraduate and graduate entomology students for employment and recruitment for vacancies in the research work.

These advantages are considered to outweigh the factors favoring Orlando, namely (a) more favorable climate for year-round research, (b) proximity to cooperators with whom research work has been conducted for many years, (c) better transportation facilities, and (d) avoidance of moving employees to another location and of changing the location of a laboratory which has attained world renown.

At Gainesville, the University of Florida is willing to donate a site of approximately 10 acres on the campus near the Poultry Unit. Access to the site is excellent.

At Orlando, an offer has been made to donate a 20-acre site approximately three miles from the city.

Need for Facilities: It is essential that the research of the Orlando laboratory be continued. Intensive research on the development of insecticides and repellents for the control of insects, mites, and ticks, which transmit diseases to man and animals or which are household pests is conducted there. Mosquitoes, lice, fleas, flies, ticks and mites are vectors of some of the most dread diseases of mankind. The objective of the research is the development of improved methods for controlling these insects thereby effecting better control of malaria, filariasis, encephalitis, rat-borne plagues transmitted by fleas, Rocky Mountain spotted fever, typhus and scrub typhus, enteric fever, and other diseases. America's armed services and civilian population place heavy reliance upon the services provided by this laboratory, and its many accomplishments have given the laboratory world-wide status as an outstanding research institution.

Relocation of the laboratory would necessitate new buildings since the present frame structures which house the laboratory are in no condition to be moved. The new buildings must include adequate space (1) for research, including rearing and maintenance of test colonies of several species of mosquitoes, body lice, ticks, mites, flies, fleas, and roaches; (2) for investigations of chemicals for the control of the various pests and disease carriers; and (3) for basic research on the various modes of action of insecticides, and on the use of radioactive materials. Special facilities will also be required for biological control investigations, such as determination of the extent to which the sterilized-male technique, effectively used against the screwworm fly in the Southeast, can be employed against the *Anopheles* mosquito and certain other insects.

Modern buildings and laboratory equipment also would greatly facilitate all phases of research now conducted at the Orlando laboratory and would enable an expansion of certain lines of basic research which cannot be conducted in the present facilities. Location of the new facilities in a less crowded area would afford better working conditions and less interruptions than does the current location.

After the new facilities are completed, the present land and buildings would be available for disposal. It is expected that the proceeds from the sale

of this property may amount to as much as \$400,000 which will be deposited in the Treasury, thus offsetting in part the cost of the proposed new facility.

Cost: The cost of providing the new facilities is estimated as follows:

Main laboratory, including test rooms, offices, service areas, sewage, utilities, drives, etc. ... 23,350 sq. ft. ...	\$761,000
Small animal building	18,000
Shops, maintenance, and general storage buildings	45,000
Garage	10,000
Radioactive storage building	6,000
Architect, engineering services, and supervision of construction	<u>60,000</u>
Total	<u>900,000</u>

CHANGE IN LANGUAGE

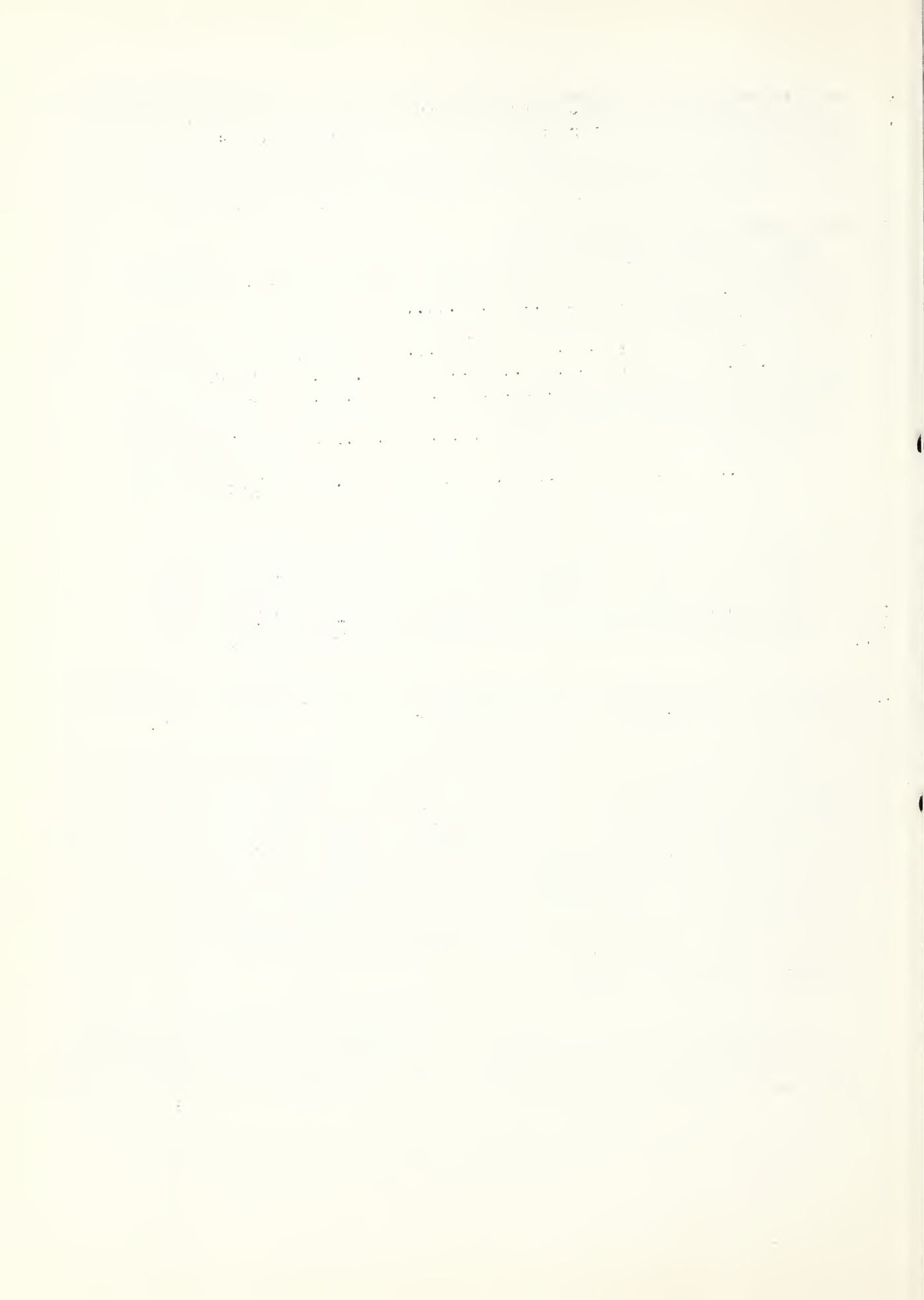
The estimates include a proposed new appropriation item as follows:

For construction of facilities and acquisition of the necessary land therefor by donation, \$900,000, to remain available until expended.

The proposed new appropriation language would provide for construction of facilities, at an estimated cost of \$900,000, to replace those currently in use at Orlando, Florida, for entomology research.

The new appropriation item provides for funds to remain available until expended. It is often extremely difficult within one fiscal year to prepare detailed plans and specifications, invite bids, and award contracts. Also, the Department is placed in a disadvantageous position when, because time does not permit asking for new bids, its only alternative is a choice between bids on hand at the end of the fiscal year. Indefinite availability of construction funds would allow sufficient time for preparation of plans and a more reasonable period of time for prospective contractors to submit carefully developed bids. This would also permit additional time to work out arrangements for acquiring land by donation and to obtain and evaluate bids most favorable to the Government.

The language provides for donation of land needed for the facilities since it is anticipated that a suitable site will be donated. The new appropriation would be in addition to construction funds under other appropriations of the Agricultural Research Service and would not be subject to limitations therein.



(d) State Experiment Stations

	<u>Payments to States and Puerto Rico</u>	<u>Penalty Mail</u>	<u>Total</u>
Appropriation Act, 1960 and base for 1961	\$31,553,708	\$250,000	\$31,803,708
Budget Estimate, 1961	<u>32,553,708</u>	<u>250,000</u>	<u>32,803,708</u>
Increase (to strengthen research at the agricultural experiment stations)	<u>+1,000,000</u>	<u>- -</u>	<u>+1,000,000</u>

PROJECT STATEMENT

Project	Increase			
	1959	1960 (estimated)	Health Bene- fit Costs : (P.L. 86-382):	Other : 1961 (estimated)
1. <u>Payments to States and Puerto Rico:</u>				
a. Hatch Act, as amended by the Act of: August 11, 1955	\$30,994,495	\$31,053,708	- -	+\$1,000,000 (1)
b. Agricultural Market- Act (Title II), sec. 204(b) (Aug. 14, 1946) :	500,000	500,000	- -	- -
Total, Payments to States and Puerto Rico	31,494,495	31,553,708	- -	+\$1,000,000
2. <u>Penalty Mail</u>	250,000	250,000	- -	- -
Total obligations or estimate a/	31,744,495	31,803,708	- -	+\$1,000,000
Unobligated balance	59,213	- -	- -	- -
Total employee health benefit costs (P. L. 86-382)	[- -]	[- -]	[\$4,356]	[214]
Total appropriation or estimate	31,803,708	31,803,708	- -	+\$1,000,000

a/ Represents obligations. Applied costs for 1959 are \$31,715,144. The difference of \$29,351 reflects primarily the effect of refunds from payments to States in 1958.

INCREASE

(1) Increase of \$1,000,000 to strengthen research at the State agricultural experiment stations.

Need for Increase: The State stations have strongly justified the request for additional Federal-grant support, primarily for the purpose of strengthening existing research and instituting limited new research in the following areas:

1. Soil and water use and conservation research needs.
2. Farm forestry.
3. Marketing and utilization.
4. Greater efficiency and adjustment in production of crop and livestock products.

In addition, there is the general need for meeting constantly increasing costs of research. A preliminary analysis of salary increases at the State experiment stations for the present fiscal year indicates an average salary increase of about 5 percent. As nearly 80 percent of the Federal-grant payment of \$31 million is used for personal services, the States would need about \$1.2 million for the additional salary costs to avoid a decrease in program activity. Scientific equipment, supplies and needed facilities likewise have increased greatly in cost.

Soil and Water Use and Conservation Research: The growing realization that rapidly depleting soil and water resources are, in many cases, limiting our economic growth has spurred a considerable expansion in Federal facilities and cooperative research looking to conservation of these resources. Intensive prosecution of these programs requires that the State experiment stations be supported at the level necessary to provide strong State participation.

Knowledge and understanding of principles involved in soil-water-plant relationships are required in planning for the effective conservation, utilization, and management of soil and water resources. Quantitative information is needed on the effects of soil and crop management systems on soil structure.

Better adapted grasses and improved methods of seedling establishment are needed to withstand rigorous growth conditions and to conserve and utilize soil and moisture effectively. Such conditions vary from semi-arid rangelands in Western areas to grassed spillways and waterways in humid areas.

Scarce water supplies must be conserved and new means developed for protecting and preserving available supplies. Anti-evaporants offer promise of controlling evaporation from water surfaces while colloidal clay linings are being developed to reduce seepage losses from hydraulic channels. Additional testing and development is needed to perfect these and other methods of safeguarding our precious water supply. Basic studies are needed on drainage principles, soil amendments, and management practices to protect our huge investments in western irrigation and to preserve the economy of the Western States.

Research in Forestry: Based on estimated increases in population, maintaining the present per capita level of wood consumption will require increases of 33 percent in the annual timber harvest by 1975 and of 71 percent by the year 2000. Forests are also receiving greater use as recreational areas, game refuges, watersheds, and pastures. Since accomplishments in forest research require many years, scientific technology must be provided now so that the commercial and farm forests can meet the demands of the future.

The research requirements of forestry embrace the entire field of biological sciences such as entomology, ecology, genetics, pathology, soils, and physiology. In addition to applied research, there is the need for greater emphasis on basic forestry research. We need to know why some tree species are resistant to attack by diseases and insects, and how this resistance can be transmitted to valuable timber types. We also need to understand more fully tree nutrition and its relationship to soils.

Results of the very modest volume of forestry research presently carried on by the State experiment stations have demonstrated the potential value of substantially expanding this program.

Marketing and Utilization Research: All of the State experiment stations point to an urgent need for new and expanded research in the marketing of major farm products, and specialty crops. Proposed marketing research would be directed towards such targets as improving and expanding market outlets, the effect of storage on quality, quality-price relationships, quality improvements, price stabilization, interregional competition, costs and returns, grading, packaging and market preparation, processing, merchandising methods and selling policies, time and rate of marketing, and the improvement of market news services.

The marketing program pertaining to forestry products should be expanded. Higher incomes from forestry are necessary to provide incentives to keep land in timber and assure an adequate supply of forest products in the years ahead. Specifically, research would be directed towards the study of market organization and structure, efficiency of operations and pricing, improved grading, market requirements, new uses, consumer preference, and costs and margins as they apply to the various operations.

An increasing amount of research seeking increased utilization of agricultural products is being planned at the State experiment station level. Future industrial utilization of agricultural materials is predicated upon finding special or unique properties which favor their selection and economic use as raw materials. Nonagricultural and synthetic materials have benefited from extensive technological research. There is a sound basis for the same approach in agriculture.

New products with new properties are being developed continuously and additional ones are constantly in demand. New processes are required to recover new materials or to improve existing ones. Often more extensive changes or modifications may be developed, thereby contributing to new or extended use. With continued support, new products and new processes which yield products of improved acceptability, convenience, and quality, and which are economically feasible should be obtained. Improved ways to maintain quality must be sought for all products as lines of distribution are lengthening.

Greater Efficiency and Adjustment of Crop and Livestock Products:

Technological discoveries and developments have been introduced at such a rapid rate in recent years that a greatly stepped-up series of production economics studies are warranted to help producers make sound management decisions to insure greater efficiency of operations. For instance, long-run costs and returns involved in soil conservation versus the practices

commonly followed should be determined. Needed research in the forestry area would deal with systems of forest management, land use, cost and returns of alternative practices for typical woodland situation, and returns from timber growing in relation to alternative forms of land use. Studies are needed to determine the place of farm equipment in adjusting farm organization and operations, the effect of technology on use, performance, and the cost of farm equipment. With the current trend toward fewer and larger farms, more studies are needed on how families can make adjustments in terms of size of land holdings and increased capital requirements. Studies of alternative combinations of resource use with respect to changes in levels of available resources, product prices, marketing outlets, and financing have been proposed for activation.

Plan of Work: Of the increase requested, 72 percent, or \$720,000, would be distributed to the agricultural experiment stations in each of the States and Puerto Rico in accordance with prescribed formulas in the Act and would be matched in full.

Twenty-five percent, or \$250,000, would be made available to State agricultural experiment stations for accelerating the program of regional cooperative research authorized by section 3(c)(3) of the Hatch Act, as amended. Under the Regional Research program the State agricultural experiment stations investigate broad research problems of such magnitude and scope that it would be difficult if not impossible for a single State station to undertake them. In all cases the research is cooperative between at least two State stations. Most such projects require participation in the planning and conduct of research by several State agricultural experiment stations and one or more research units of U. S. Department of Agriculture. A number of new regional projects are contemplated in fiscal year 1961.

Three percent of the increase, or \$30,000, would be available for expenses necessary for administration of the increased funds available to the experiment stations, and for coordination of research among the States and between the States and the Federal Government. It would be used to strengthen the technical staff required to help plan, coordinate, and review the overall research program so as to obtain the maximum benefit of the increase.

The relation of the proposed increase to the funds available for fiscal year 1960 is as follows:

	<u>FY 1960</u>	<u>FY 1961</u> <u>(estimated)</u>	<u>Increase</u>
Allotted to States			
and Puerto Rico	a/\$24,945,708	a/\$25,665,708	+\$720,000
Regional Research Fund ..	5,900,000	6,150,000	+250,000
Administration	708,000	738,000	+ 30,000
Total	<u>31,553,708</u>	<u>32,553,708</u>	<u>+1,000,000</u>

a/ Includes \$500,000 for marketing research, authorized under Section 204 (b) of the Agricultural Marketing Act.

The estimated distribution of the increase by States follows:

Alabama	\$22,189	Nevada	\$4,386
Alaska	4,380	New Hampshire	5,537
Arizona	6,311	New Jersey	8,223
Arkansas	18,418	New Mexico	6,922
California	20,005	New York	20,196
Colorado	8,341	North Carolina	31,119
Connecticut	6,744	North Dakota	8,743
Delaware	4,845	Ohio	24,183
Florida	10,899	Oklahoma	14,907
Georgia	22,964	Oregon	9,646
Hawaii	5,821	Pennsylvania	25,933
Idaho	7,263	Puerto Rico	21,391
Illinois	21,215	Rhode Island	4,631
Indiana	18,382	South Carolina	17,625
Iowa	18,689	South Dakota	8,648
Kansas	12,896	Tennessee	23,322
Kentucky	22,959	Texas	31,153
Louisiana	15,629	Utah	5,993
Maine	7,389	Vermont	5,910
Maryland	9,276	Virginia	19,914
Massachusetts	8,308	Washington	10,972
Michigan	20,087	West Virginia	14,410
Minnesota	18,156	Wisconsin	18,433
Mississippi	22,916	Wyoming	5,206
Missouri	20,232	Total	720,000
Montana	6,918	Regional Research Fund .	250,000
Nebraska	11,365	Administration	30,000
		Total	<u>1,000,000</u>

CHANGE IN LANGUAGE

The estimates include a proposed change in the language of this item as follows (deleted matter enclosed in brackets):

STATE EXPERIMENT STATIONS

Payments to States [,Hawaii,] and Puerto Rico: For payments to agricultural experiment stations * * *

It is proposed to delete the work "Hawaii" from the title of this subappropriation since Hawaii has become a State. This change will not affect in any way the payments to Hawaii from this appropriation.

STATUS OF PROGRAM

General: This appropriation represents the Federal Government's contribution to the State and Puerto Rican agricultural experiment stations, established pursuant to the provisions of the Hatch Act of 1887.

The State agricultural experiment stations conduct research and experiments along lines authorized by the Hatch Act, as amended, on the problems constantly encountered in the development of a permanent and sustaining agriculture and in improvement of the economic and social welfare of rural families. Because of differences in climate, soil, market outlets, and other local conditions, each State has distinct problems in the production and marketing of crops and livestock. The farmers in the individual States naturally look to their State agricultural experiment stations for solution of the State and local problems and, in recent years, have requested increased services to help meet changing conditions.

Research programs at the State stations, to be most effective, include participation in regional and national programs. Joint attack by a group of State stations is the most effective and often the only practical approach to problems of common interest. The stations, to an ever increasing extent, are acting together as regional groups to provide cooperative coordinated attacks on problems of regional and national interest. In a similar manner, the research programs of the State agricultural experiment stations and the Department of Agriculture are supplementary and interdependent.

Federal-grant funds constitute a powerful force in bringing about inter-State cooperation and Federal-State collaboration in the planning and conduct of this over-all program of agricultural research. Therefore, the full impact of the Federal-grant funds cannot be fully evaluated solely on the basis of the amount of funds provided.

Research at State stations during the fiscal year 1959 included approximately 5910 specific lines of research financed wholly or in part by Federal-grant funds and about 6745 lines of research under non-federal funds. These lines of research are continued as long as they are productive. Fifteen to 18% of the research program passes its point of maximum productiveness annually and is replaced by new research on pressing problems.

Distribution of Payments: The Hatch Act, as amended on August 11, 1955, provides that the distribution of Federal payments to States for fiscal year 1955 shall become a fixed base and that any sums appropriated in excess of the 1955 level shall be distributed in the following manner:

- 20% shall be allotted equally to each State.
- not less than 52% shall be allotted to the States as follows:
 - one-half in an amount proportionate to the relative rural population of each State to the total rural population of all States, and
 - one-half in an amount proportionate to the relative farm population of each State to the total farm population of all States.

(These populations shall be determined by the last preceding decennial census current at the time each such additional sum is first appropriated).

- not more than 25% shall be allotted to the States for cooperative research in which two or more State agricultural experiment stations are cooperating to solve problems of the agriculture of more than one State.
- 3% shall be available to the Secretary of Agriculture for the administration of this Act.

The amended Act also provides that any amount in excess of \$90,000 available for allotment to any State, exclusive of the regional research fund, shall be matched by the State out of its own funds for research, and for the establishment and maintenance of facilities necessary for the prosecution of such research.

The amended Hatch Act retains the requirement for marketing research as it existed in fiscal year 1955 and provides that 20% of the funds appropriated in excess of the 1955 appropriations shall be used for conducting marketing research projects approved by the Department of Agriculture. In addition, Section 204(b) of the Agricultural Marketing Act also authorizes payments to State agricultural experiment stations on a matching basis for cooperative projects in marketing research.

Table A shows the distribution of Federal payments to States and non-Federal funds for research at State agricultural experiment stations for the fiscal year 1959. Table B shows the appropriations for State Experiment Stations for the fiscal years 1959, 1960, and estimated for fiscal 1961. Table C shows the approximate distribution of Federal and non-Federal funds by fields of research during fiscal year 1959.

Table A

Distribution of Federal Payments to States and Non-Federal Funds
for Research at State Agricultural Experiment Stations

FISCAL YEAR 1959

State	Hatch Act, as amended	Section 204(b) Agricultural Marketing Act	Total Federal Funds	Non-Federal Funds	Grand Total
Payments to States and Puerto Rico:					
Alabama.....	\$ 701,993	\$ ----	\$ 701,993	\$ 1,949,616	\$ 2,651,609
Alaska.....	198,093	14,050	212,143	265,021	477,164
Arizona.....	255,682	5,700	261,382	1,474,165	1,735,547
Arkansas.....	590,803	2,500	593,303	1,800,853	2,394,156
California.....	664,897	18,500	683,397	11,722,920 (Est.)	12,406,317 (Est.)
Colorado.....	312,306	----	312,306	1,134,511	1,446,817
Connecticut.....	270,807	5,000	275,807	1,436,926	1,712,733
Delaware.....	210,306	4,000	214,306	511,839	726,145
Florida.....	395,290	19,714	415,004	4,843,708	5,258,712
Georgia.....	730,367	14,700	745,067	2,993,576	3,738,643
Hawaii.....	237,834	----	237,834	836,300	1,074,134
Idaho.....	278,286	5,000	283,286	881,815	1,165,101
Illinois.....	690,170	6,150	696,320	2,915,065	3,611,385
Indiana.....	602,963	33,500	636,463	3,461,249	4,097,712
Iowa.....	605,310	25,250	630,560	2,892,778	3,523,338
Kansas.....	447,413	27,160	474,573	2,310,736	2,785,309
Kentucky.....	725,228	18,000	743,228	1,423,678	2,166,906
Louisiana.....	519,667	3,500	523,167	2,889,362	3,412,529
Maine.....	286,518	23,000	309,518	446,765	756,283
Maryland.....	334,548	5,500	340,048	1,128,807	1,468,855
Massachusetts.....	322,760	----	322,760	662,430	985,190
Michigan.....	657,836	95,926	753,762	2,881,182	3,634,944
Minnesota.....	586,625	----	586,625	3,405,035	3,991,660
Mississippi.....	710,856	9,000	719,856	1,997,456	2,717,312
Missouri.....	646,350	42,000	688,350	1,821,858	2,510,208
Montana.....	271,263	----	271,263	1,507,274	1,778,537
Nebraska.....	399,571	13,500	413,071	2,005,071	2,418,142
Nevada.....	196,947	----	196,947	232,091	429,038
New Hampshire.....	232,040	----	232,040	188,286	420,326
New Jersey.....	316,631	10,000	326,631	1,959,338	2,285,969
New Mexico.....	270,380	----	270,380	531,430	801,810
New York.....	674,338	----	674,338	5,800,422	6,474,760
North Carolina.....	959,622	----	959,622	2,354,740	3,314,362
North Dakota.....	323,018	----	323,018	1,289,694	1,612,712
Ohio.....	779,600	11,500	791,100	2,686,462	3,477,562
Oklahoma.....	505,668	----	505,668	1,812,161	2,317,829
Oregon.....	352,872	26,000	378,872	2,644,411	3,023,283
Pennsylvania.....	857,357	5,000	862,357	1,995,303	2,857,660
Puerto Rico.....	654,165	----	654,165	1,545,301	2,199,466
Rhode Island.....	205,537	----	205,537	266,839	472,376
South Carolina.....	574,079	----	574,079	1,073,660	1,647,739
South Dakota.....	320,606	6,500	327,106	1,132,197	1,459,303
Tennessee.....	732,709	2,500	735,209	1,080,337	1,815,546
Texas.....	975,292	13,000	988,292	4,574,972	5,563,264
Utah.....	243,946	----	243,946	905,375	1,149,321
Vermont.....	242,360	----	242,360	219,961	462,321
Virginia.....	648,598	----	648,598	1,904,778	2,553,376
Washington.....	392,890	17,600	410,490	3,230,342	3,640,832
West Virginia.....	495,888	1,250	497,138	570,053	1,067,191
Wisconsin.....	598,286	----	598,286	3,936,975	4,535,261
Wyoming.....	220,516	15,000	235,516	661,036	896,552
Total.....	24,427,087	500,000	24,927,087	104,196,160	129,123,247
Regional Research Fund.....	5,899,875	----	5,899,875	----	5,899,875
Administration.....	667,533	----	667,533	----	667,533
Unobligated balance.....	59,213	----	59,213	----	59,213
Subtotal.....	31,053,708	500,000	31,553,708	104,196,160	135,749,868
Penalty Mail:					
Reimbursement to Post Office					
Department for penalty mail costs of:					
State experiment station directors.....	250,000	--	250,000	----	250,000
Grand Total.....	31,303,708	500,000	31,803,708	104,196,160	135,999,868

Table B

Appropriations for State Experiment Stations

Fiscal Years 1959-1961

State	Fiscal Year 1959	Fiscal Year 1960	Fiscal Year 1961 (Estimated)
Payments to States and			
Puerto Rico:			
Alabama.....	\$ 701,993	\$ 701,993	\$ 724,182
Alaska.....	198,093	198,093	202,473
Arizona.....	255,682	255,682	261,993
Arkansas.....	590,803	590,803	609,221
California.....	664,897	664,897	684,902
Colorado.....	312,306	312,306	320,647
Connecticut.....	270,807	271,674	278,418
Delaware.....	210,306	210,306	215,151
Florida.....	395,290	395,364	406,263
Georgia.....	730,367	730,367	753,331
Hawaii.....	237,834	237,835	243,656
Idaho.....	278,286	278,286	285,549
Illinois.....	690,170	690,170	711,385
Indiana.....	602,963	602,963	621,345
Iowa.....	605,310	605,310	623,999
Kansas.....	447,413	447,413	460,309
Kentucky.....	725,228	725,228	748,187
Louisiana.....	519,667	519,667	535,296
Maine.....	286,518	286,518	293,907
Maryland.....	334,548	345,414	354,690
Massachusetts.....	322,760	322,760	331,068
Michigan.....	657,836	657,836	677,923
Minnesota.....	586,625	586,625	604,781
Mississippi.....	710,856	710,856	733,772
Missouri.....	646,350	646,350	666,582
Montana.....	271,263	271,263	278,181
Nebraska.....	399,571	399,571	410,936
Nevada.....	196,947	196,947	201,333
New Hampshire.....	232,040	232,040	237,577
New Jersey.....	316,631	316,631	324,854
New Mexico.....	270,380	270,380	277,302
New York.....	674,333	674,413	694,609
North Carolina.....	959,622	959,622	990,741
North Dakota.....	323,018	323,018	331,761
Ohio.....	779,600	779,600	803,783
Oklahoma.....	505,668	505,668	520,575
Oregon.....	352,872	352,872	362,518
Pennsylvania.....	857,357	857,357	883,290
Puerto Rico.....	654,165	660,885	682,276
Rhode Island.....	205,537	205,537	210,168
South Carolina.....	574,079	574,079	591,704
South Dakota.....	320,606	320,606	329,254
Tennessee.....	732,709	732,709	756,031
Texas.....	975,292	975,292	1,006,445
Utah.....	243,946	243,946	249,939
Vermont.....	242,360	242,360	248,270
Virginia.....	648,598	648,598	668,512
Washington.....	392,890	392,890	403,862
West Virginia.....	495,888	495,888	510,298
Wisconsin.....	598,286	598,286	616,719
Wyoming.....	220,516	220,534	225,740
Subtotal.....	24,427,087	24,445,708	25,165,708
Regional Research Fund a/.....	5,899,875	5,900,000	6,150,000
Administration.....	667,533	708,000	738,000
Unobligated balance.....	59,213	---	---
Payments authorized for			
Marketing Research, Section			
204(b), Agricultural			
Marketing Act.....	500,000	500,000	500,000
Subtotal.....	31,553,708	31,553,708	32,553,708
Penalty Mail:			
Reimbursement to Post Office			
Department for penalty mail			
costs of State experiment			
station directors.....	250,000	250,000	250,000
Grand Total.....	31,803,708	31,803,708	32,803,708

a/ Allotted to States by projects on the basis of recommendations by a committee of experiment station directors and approved by the State Experiment Stations Division, Agricultural Research Service.

TABLE C

Distribution of Federal-Grant Payments to States by Fields
of Research at State Agricultural Experiment Stations

Fiscal Year 1959

Field of Research	Federal-Grant Funds
Agricultural Engineering.....	\$ 986,000
Animal Diseases and Parasites.....	1,634,000
Farm Economics and Adjustment.....	1,356,000
Field Crops.....	3,792,000
Horticultural Crops.....	1,695,000
Home Economics and Human Nutrition.....	1,850,000
Insect Control.....	1,634,000
Livestock and Poultry.....	5,549,000
New and Expanded Uses of Agricultural Products.....	1,079,000
Plant Diseases.....	1,757,000
Soil and Water Conservation.....	3,237,000
Forestry Crops.....	277,000
Marketing (Domestic).....	5,980,962
Total Obligations.....	<u>\$30,826,962</u>
Administration.....	667,533
Penalty Mail.....	250,000
Unobligated Balance.....	<u>59,213</u>
Total Appropriation.....	<u>\$31,803,708 ^{1/}</u>

1/ Includes \$500,000 Section 204(b) Agricultural Marketing Act Funds.

Payments to States and Puerto Rico

Selected Examples of Recent Progress

1. More beef and faster weight gains result from inbreeding. --The beef cattle research program, in which 40 State experiment stations and the Department have been cooperating since 1947, is beginning to pay off in more and heavier calves at weaning. In a series of experiments at the Colorado station, selected line-crosses of Hereford cows outproduced control groups by 50% in pounds of calves weaned. In addition, calves from the inbreds gained about 5% faster and reached marketable weight in less time than did the control animals. Thus, even with a slow reproducing species like cattle, heritable qualities such as weight advantage at weaning, larger calf crops per herd, and more rapid weight gain following weaning are possible through inbreeding and cross-breeding in as brief a period as 12 years. Greater efficiency in meat production obtained in this way is low in cost and shows promise of developing an increased domestic market for feedstuffs.
2. New instrument measures water needs of fruit trees. --The Idaho station has developed an instrument that determines the water requirements of fruit trees by measuring minute changes in the daily growth or shrinkage of tree trunks. The device, called a dendrometer, is expected to do away with the traditional uncertainties about tree water needs in irrigated orchards. In experimental apple orchard tests, 5 irrigations based on dendrometer readings gave as high a yield and better fruit color than 12 irrigations spaced arbitrarily at uniform intervals. In experimental prune orchards, 4 irrigations based on dendrometer readings gave yields, fruit size, and fruit quality equal to that of trees irrigated 11 times by uniformly spaced applications. Commercial use of the dendrometer offers (1) prevention of fruit losses and reductions in yield through timely discovery of critical water deficiency in irrigated orchards and (2) greater conservation of water and lower cost of water application.
3. Two high-oil, high protein corn hybrids announced. --The Nation's livestock feeders and the starch industry are expected to benefit materially from development of two new high-oil, high-protein corn hybrids announced by the Illinois station. These hybrids yield about 30% more oil and 10% more protein than previously available commercial hybrids. They are similar to standard hybrids in grain yield, standability, and other traits. The new hybrids were developed during the past 10 years by crossing standard inbred lines with high-oil and high-protein strains.
4. Confinement system for hogs need not be expensive. --Research with swine at the Iowa station shows that so long as the growing and finishing animals are protected against extremely low or high

temperatures their performance will compare favorably with that of hogs reared by conventional methods. In the mean temperature range of 35 to 40 degrees F., young, growing, finishing swine are not severely retarded when protected from wind and wet. Heavier swine raised in confinement showed drops in daily gains and feed efficiency for each degree of temperature rise from 80 to 85 degrees F. Under modern hog rearing systems, a considerable amount of money may be invested in specialized housing and equipment designed to maintain a closely controlled temperature environment. Results of the Iowa research and similar findings in other State and Federal research should serve as a guide to hog producers for installation of controlled-environment facilities.

5. Quick relief for cage layer fatigue developed.---A satisfactory method for achieving the rapid recovery of hens that become afflicted with cage layer fatigue has been developed by the Maryland station. This method consists of fastening a flexible but firm plastic pad about one-quarter inch thick on the floor of the cage of the affected birds. Excellent field results have also been reported with the use of wooden shingles or a thin board, instead of the plastic pad. Apparently cage layer fatigue is due not to poor diet but to the pressure of the hen's feet upon the wire cage floor, and alleviation of that pressure by the plastic pad will bring recovery in about a week. It is reported that up to 5% of hens kept in cages at commercial egg laying establishments are troubled with cage layer fatigue.
6. Grazing of calves proves profitable in South. ---Most beef animals produced in Mississippi result from a cow-calf system with the calves being dropped in the spring and sold at weaning. Mississippi station findings indicate that this system of beef production is the least profitable of the several systems studied. Returns, above variable costs, from the average amount of grazing of native pastures found on Prairie farms (260 acres of open permanent pasture) amount to approximately \$1,200 per farm for this system of beef production, compared to \$2,800 for farms which roughed the calves through the winter on hay, silage, and cottonseed meal and fed them out on permanent pasture the next year. Grazing weaned calves on temporary winter pasture before selling, instead of selling at weaning, increased net returns to approximately \$3,600 per farm. When 140 acres of the 260 acres of native pasture land were improved to the average level of improved pastures of the Prairie area, the returns above variable costs, other than those incurred for improving the pasture, amounted to \$4,200 per farm from the pasture area. These four systems were the most promising of those studied.

7. Pre-slaughter handling of livestock responsible for "dark cutters". -- Producers marketing livestock sometimes get a considerable discount on the price paid them for beef cattle because the carcasses dressed out as "dark cutters." According to research reported by the Missouri station, carcasses classed as "dark cutters," as indicated by their dark-colored muscling, are usually the result of pre-slaughter handling, such as that which may be encountered before and during travel to market. In the Missouri experiments, it took four days before animals subjected to stress and strain could be brought back to normal and yield better quality meat. Hogs and lambs may also dress out as "dark cutters" for the same reason. The problem can be avoided by proper handling of animals en route to market and prior to slaughter.
8. Nutritionally available amino acids provided by corn. -- Though the quantities of essential amino acids needed by adult men and women have been determined, there is still uncertainty whether human requirements are met when these same amounts of amino acids are provided by particular foods. This is because some foods will not "give up" their amino acids to the body in the normal digestive process. The Nebraska station has shown in recent research that two amino acids--~~valine~~ and threonine--when provided by corn, are completely available to the body. Research of this kind will eventually make possible matching human amino acid needs with the amounts nutritionally available from respective foods.
9. Plant growth obtained with simple cells in culture. --A long awaited goal in plant science, the growth of plants from free cells, has been achieved by botanists of the Cornell station. They succeeded in taking simple unspecialized cells from carrot roots and nurturing them so that they developed into plants typical of the parent, including roots, shoots, whole plants, flower, and seed. In other words, they have made unspecialized cells behave like specialized reproductive cells. The initial medium in which the cells grew was coconut milk, a medium that normally nourishes an immature embryo and contains substance that promote cancer-like random proliferations in adult cells. Knowledge growing out of this research may lead to many new fields of basic and applied scientific research. The study was conducted in cooperation with the National Science Foundation and the National Cancer Institute.
10. Vitamin A needs of bovines studied. --The Oregon station has studied many aspects of the effect of prenatal vitamin A intake in dairy cattle. The results show that the greatest danger from insufficient vitamin A levels in bovines is during calthood or even earlier, during the prenatal period. In the Oregon experiments, the vitamin A liver values for dairy calves reared on a vitamin A-deficient diet seldom reached normal levels later in

life, even after such animals had been placed on a normal diet for a year. Cows that suffered from inadequate vitamin A during calthood often develop abnormal adrenal glands, which among other things lowered their resistance to disease. Lower than normal milk production and poor breeding also showed up in such cows. In exceptional cases, abnormal brains developed.

11. Why boll weevils resist insecticides in late season. --Basic research on boll weevil physiology and nutrition, carried on cooperatively by the Texas station and the Department, has brought a better understanding of late season boll weevil resistance to insecticides. Chemically-defined diets were developed to permit rearing experimental boll weevil larvae throughout the year. This procedure permitted more precise measurements of metabolic reactions and their relationship to insecticide resistance and made possible continuous observations rather than seasonal ones dependent on field collections. During the latter part of the growing season, many boll weevil adults were found entering a period of diapause, a physiological resting stage in which they continued physically active. Weevils in this stage were up to 100 times as tolerant to certain chlorinated hydrocarbon insecticides as were weevils in their normal physiological and reproductive state.
12. Study on ketones will aid cheese manufacturers. --The characteristic flavor of blue cheese is caused by a family of chemicals known as ketones. Molds produce ketones by acting upon certain fatty acids in the butterfat or milk. Research conducted by the Wisconsin station, found that sometimes the molds changed fatty acids to ketones and sometimes they would not. Repeated tests led to a growth medium in which no ketones were ever formed, even when the mold grew well. Addition of various materials, such as vitamins, amino acids, and the like, enabled the mold in this particular medium to form ketones. It was noted that the mold in this medium produced spores, while the unsupplemented medium did not. Then it was found that where spores broken free from their cells were incubated with fatty acids, they produced ketones and blue cheese flavor dependably and predictably. In other words, the spores were the active ketone producers. From an applied standpoint, these findings will help cheesemakers produce a better product because they can regulate ripening and predict with considerable accuracy the flavor and quality of the cheese. The research also opens up a whole new field of basic investigation. The spore cells were formerly thought to be involved only in reproduction of the organism, but now it is known that they also have a functional, flavor -creating purpose.

13. Time of harvest affects quality of tomatoes which are stored. -- The critical point in the harvesting of tomatoes for the storage market is the point at which the fruit begins to show red pigmentation. The Arkansas station, has shown that deferring harvest of green-pack tomatoes until the fruit begins to show red improves the market quality and prolongs the period of satisfactory storage at 40-60° F. In the experiments, tomatoes harvested after red coloring began contained more sugar than tomatoes harvested totally green. And unlike tomatoes harvested while totally green, their acid content continued to decline while in cold storage.

Regional Research Fund

For the conduct of research in which two or more State agricultural experiment stations are cooperating to solve problems that concern the agriculture of more than one State, there is available the "Regional Research Fund" authorized by Section 3(c) (3) of the Hatch Act, as amended, (formerly Section 9(b) (3) of the Bankhead-Jones Act). This fund totals \$5,900,000 in 1960. Allotments are made to stations on the basis of projects recommended by the Committee of Nine established by the Act to represent the State stations.

The following are examples of work carried in 1959 under this fund:

1. Virus responsible for mucosal disease. --Evidence accumulated by the cooperative regional research project of the North Central agricultural experiment stations and the Department that a virus is probably responsible for producing mucosal disease in cattle. The North Dakota station has found that the causative agent can be transmitted from animal to animal in drinking water, and that sheep may be infected in addition to cattle. These discoveries will be important in developing successful procedures for controlling the disease. A special technique for growing the mucosal disease agent in the laboratory has been developed by the Iowa, North Dakota, and Nebraska stations, and a test to distinguish infected animals from those susceptible has been developed by the North Dakota station. These advancements provide the first definite evidence that a preventive vaccine might be developed.
2. Western livestock producers income improved through better market information. A regional marketing project conducted cooperatively by the eleven Western State Experiment Stations with the Agricultural Marketing Service has provided a basis for substantially improving returns to livestock producers who sell their cattle to order buyers, feeders, and packers. Such sellers have lacked adequate market information since most market news has come from terminal markets. A research experiment was carried out in which a weekly market report showing livestock prices, sales, and movements at country points was provided to a sample of producers. New Mexico stockmen reported receiving 2 to 3 cents per pound more for their cattle because of this report. An increase of as much as 1/2 cent per pound applied to livestock

sales in that State alone would increase annual income by more than \$1.5 million.

As a result of this marketing research project and the follow-up work of service agencies, information on country sales is now being made available through the regular market news service of the Department to livestock producers by radio and newspaper. In addition the Department is cooperating with the Extension Services of Western States in issuing a regional short-term outlook report. The additional information places livestock producers in a stronger bargaining position than previously by having more knowledge of the true value of their commodity on the market of their choice, and will enable the producers to continue to profit from results of this research.

3. Research directed to reduce losses from stone fruit virus diseases.--

Over 45 virus diseases of stone fruits have been found in the Western States. Orchardists and nurserymen suffer losses growing out of stone fruit virus diseases running into several million dollars annually. Some progress toward alleviating such losses is being made by the State experiment stations taking part in the Western Regional Project on Virus Diseases of Deciduous Fruit Trees. The Oregon station found that a single virus causes 4 distinct diseases. Indexing to determine whether fruit trees are free from the 4 diseases will be simplified and less costly since they need now concern themselves with only one virus. The California station has shown that propagating wood can be freed of virus by long, hot air treatment. Some of the best stone fruit understock seed sources have been found by the Washington station and determined to be virus free. This material has been made available to scientists for experimental work and to nurserymen. Equipment devised by the Utah station has already contributed toward a better understanding of the nature and composition of the virus particle.

Penalty Mail

The Hatch Act of 1887, as amended (7 U.S.C. 361f), provides for the mailing under penalty indicia by agricultural experiment stations of bulletins, reports, periodicals, reprints of articles, and other publications, including lists of publications necessary for the dissemination of results of research. Mailings include not only those to individual farmers upon request but also to newspapers, libraries, other experiment stations, and organizations interested in results of research and dissemination of such results.

Under the terms of Public Law 705, approved July 14, 1956, the Department paid to the Post Office Department \$250,000 to cover postage on third and fourth class mail sent under the penalty privilege by the State agricultural experiment stations during the fiscal year 1959. This payment covered the procurement of 3,101,150 envelopes, wrappers, labels, and tags by the experiment stations in the 50 States and Puerto Rico. Approximately the same volume of mail is anticipated in fiscal years 1960 and 1961.

(e) Diseases of Animals and Poultry

PROJECT STATEMENT

Project	1959	1960 (estimated)	1961 (estimated)
Eradication of vesicular exanthema of swine <u>a/</u>	<u>b/</u> \$1,020,432:	- -	- -
Transfers from Commodity Credit Corporation	<u>b/</u> -990,807:	- -	- -
Reappropriation of prior year balances	-29,625:	- -	- -
Appropriation or estimate	- -	- -	- -

a/ Represents obligations. Applied costs for 1959 are \$1,012,565 and for 1960 are \$41,976. The difference of \$7,867 in 1959 reflects, primarily, adjustments in prior year obligations; the difference of \$41,976 in 1960 reflects, primarily, the receipt of orders to complete the program that were placed in fiscal year 1959.

b/ Excludes return of \$18,445 to Commodity Credit Corporation. For comparative purposes, obligations are shown under "Salaries and Expenses, Agricultural Research Service, plant and animal disease and pest control," since the work is being financed from that appropriation beginning with 1960.

It is necessary to retain this item so that the Department will be in position to finance such emergency measures as may be necessary to confine and eradicate outbreaks of poultry and livestock diseases, such as foot-and-mouth disease, vesicular exanthema of swine, European fowl pest, etc., which are determined to constitute an emergency.

(f) Animal Disease Laboratory Facilities

PROJECT STATEMENT

Project	1959	1960 (estimated)	1961 (estimated)
Facilities for animal disease research and control <u>a/</u>	\$14,585,262	\$346,210	\$720,000
Unobligated balance brought forward	-15,651,472	-1,066,210	-720,000
Unobligated balance carried forward	1,066,210	720,000	- -
Total appropriation or estimate ..	- -	- -	- -

a/ Represents obligations. Applied costs are \$4,833,419 for 1959, \$8,576,210 for 1960, and \$2,603,043 for 1961. Differences between costs and obligations reflect, primarily, the normal delay between letting contracts and completion of work.

STATUS OF PROGRAM

The Supplemental Appropriation Act, 1957, provided \$16,250,000 for construction of animal disease research facilities. This was in addition to the unobligated balance of \$221,079 available from the Supplemental Appropriation Act, 1956, which provided \$250,000 for initial surveys, plans, and specifications.

The National Animal Disease Laboratory is being constructed on a 318-acre tract of donated land near Iowa State University, Ames, Iowa.

On August 1, 1958, a construction contract was awarded to Henry C. Beck Builders, Inc., Dallas, Texas, in the amount of \$14,331,000. An additional contract award also was made to Chenoweth-Kern Elevator Service, Des Moines, Iowa, for elevator work in the amount of \$20,786.

Actual construction of the laboratory was started on August 11, 1958. It is anticipated that this facility will be completed early in calendar year 1961. The shops building has been completed. The main laboratory, two large animal buildings, quarantine barns, boiler plant, waste treatment plant, and other supporting facilities will be under roof by January 1960.

(g) Research Facilities

PROJECT STATEMENT

Project	1959	1960 :(estimated):	1961 :(estimated):
Facilities for research on foot- and-mouth and other diseases of animals a/	\$132,382	\$15,745	- -
Unobligated balance brought for- ward	-148,127	-15,745	- -
Unobligated balance carried for- ward	15,745	- -	- -
Total appropriation or estimate	- -	- -	- -

a/ Represents obligations. Applied costs for 1959 are \$103,544 and for 1960, \$86,668. Differences between costs and obligations reflect, primarily, the normal lag between the time construction contracts are made and work is completed.

STATUS OF PROGRAM

The Urgent Deficiency Appropriation Act, 1952 provided \$10,000,000 for the establishment of facilities for research on foot-and-mouth and other animal diseases. This was in addition to the unobligated balance of \$456,823 available from the Second Deficiency Appropriation Act, 1949 which provided \$500,000 for plans and specifications.

The main laboratory facilities located at Plum Island, New York were completed early in calendar year 1957 and are in operation. The remaining building to be constructed with these funds is the large animal holding facility. Completion of this facility now under construction will be accomplished with the balance of funds brought forward into the fiscal year 1960.

(h) Alterations and Improvements, Animal Quarantine
Station, Clifton, New Jersey

Appropriation Act, 1960 and base for 1961	\$30,000
Budget Estimate, 1961	- -
Decrease (due to elimination of non-recurring item)	<u>-30,000</u>

PROJECT STATEMENT

Project	1959	1960 (estimated)	1961 (estimated)
Alterations and improvements at animal quarantine station (authorized appropriation)	- -	\$30,000	- -

STATUS OF PROGRAM

The Act of August 20, 1958 (72 Stat. 680) authorized the Department to convey to the City of Clifton, New Jersey, about 7 acres of land belonging to the United States animal quarantine station located there. The Federal Government received \$83,400, of which \$30,000 was deposited on August 19, 1959, to a special account, in accordance with the Act, for alterations of buildings, facilities and improvements on the remaining land at the station. Funds are being used principally for alteration of quarantine barns. The work is expected to be completed in fiscal year 1960.

(i) Working Capital Fund, Agricultural Research Center

This working capital fund is a continuing operating fund established by the 1951 Agricultural Appropriation Act by an appropriation of \$300,000 to finance the operating costs of certain centralized services and facilities at the Agricultural Research Center pending receipt of reimbursements for such costs from the agencies provided with the services. The integrity of the original appropriation is maintained from year to year by means of these reimbursements.

Statements reflecting the assets and liabilities, and income and expenses, of the working capital fund as of June 30, 1959, as well as estimates for 1960 and 1961, are included in the 1961 Budget.

STATEMENT OF OBLIGATIONS UNDER ALLOTMENTS AND OTHER FUNDS

(Includes only those amounts which, by November 30, 1959, were actually received or programmed for 1960 or 1961. Since work for other agencies is performed on a service basis, at the request of those agencies and for their benefit, it is not practicable to estimate in advance the amounts to be received in most cases.)

Item	: : Obligations: : 1959	: Estimated : : Obligations: : 1960	: Estimated : : Obligations: : 1961
Allotment from:	:	:	:
Watershed Protection, Soil Conservation	:	:	:
Service:	:	:	:
1. Investigations and planning	: \$29,651	: \$24,600	: \$20,000
2. Works of improvement	: 65,567	: 89,615	: 91,000
3. Surveys and investigations of water resources programs	: 184,599	: 203,000	: 207,000
Total, Soil Conservation Service	: 279,817	: 317,215	: 318,000
Allocations (Advances from other Agencies):	:	:	:
International Cooperation Administra- tion:	:	:	:
For training, consultation and technical assistance activities	: 787,804	: 869,450	: - -
Office of Civil and Defense Mobiliza- tion:	:	:	:
For nationwide radiological defense training of agricultural employees ..	: - -	: 80,000	: 25,000
Improved food for shelters	: - -	: - -	: 85,000
Total, Office of Civil and Defense Mobilization	: - -	: 80,000	: 110,000
Department of State:	:	:	:
Plant quarantine inspection services, Australia and New Zealand	: 5,250	: 5,250	: - -
Total, Allocations	: 793,054	: 954,700	: 110,000
Trust Funds:	:	:	:
Expenses and refunds, inspection and grading of farm products:	:	:	:
1. Inspection and certification of animal foods and inedible agri- cultural products in interstate and foreign commerce	: 100,759	: 62,000	: 62,000
2. Identification and certification service for meat and other products	: 75,755	: 65,000	: 65,000
3. Contract specification work on meat and meat food products	: 225,176	: 118,000	: 118,000

(Continued on next page)

Item	Obligations, 1959	Estimated: Obligations, 1960	Estimates Obligations, 1961
<u>Trust Funds - Cont'd</u>			
<u>Expenses, feed and attendants for</u> <u>animals in quarantine</u>	25,188:	35,209:	30,000
<u>Miscellaneous contributed funds</u>	274,997:	523,380:	356,439
<u>Prior year advances returned</u>	6,686:	698:	- -
<u>Total, Trust Funds</u>	708,561:	804,287:	631,439
<u>Obligations under Reimbursements from</u> <u>Governmental and Other Sources:</u>			
<u>Research</u>	929,977:	991,700:	1,029,500
<u>Plant and animal disease and pest</u> <u>control</u>	879,614:	461,000:	461,000
<u>Meat inspection</u>	6,729,898:	6,564,000:	6,564,000
<u>Miscellaneous services to other</u> <u>accounts</u>	149,702:	122,300:	122,800
<u>Total, Obligations under reimburse-</u> <u>ments</u>	8,689,191:	8,139,000:	8,177,300
<u>TOTAL, OBLIGATIONS UNDER ALLOTMENTS AND</u> <u>OTHER FUNDS</u>	10,470,623:	10,215,202:	9,236,739

PASSENGER MOTOR VEHICLES

The 1961 Budget estimates propose the purchase of five additional passenger motor vehicles and the replacement of 165 such vehicles.

Additional Vehicles

Two additional passenger motor vehicles are needed for use at the National Disease Laboratory at Ames, Iowa. Construction of the facilities at Ames was started in August 1958. It is expected that the facilities will be ready for full-scale operation during the latter part of fiscal year 1961. One of these cars will be used in locating suitable experimental animals for use in the laboratory which will require farm-to-farm travel to select animals for purchase. The other car will be used by the director and other research personnel of the station in travel to universities and other points in the general area of the laboratory to attend meetings and to perform other official duties.

Three additional passenger motor vehicles are needed for use by the Soil and Water Conservation Research Division at the following locations: Riesel, Texas; Morris, Minnesota; and Watkinsville, Georgia. In 1960, Congress provided additional funds over the budget estimates for research at these locations. At each location, a number of additional scientists are being added to the staff. The work involves collection of data from field studies involving considerable travel by car for the effective and efficient conduct of the work. Present cars are being fully utilized and are not available to meet the additional need.

Replacements

It is estimated that all of the 165 passenger vehicles to be replaced will either have mileage of more than 60,000, or be 6 or more years old. A detailed justification of the proposed replacement follows:

Research: Replacements would be made of 50 of the 408 passenger motor vehicles operated at field stations engaged in research. These vehicles are used in travel where no public transportation is available, such as to farms, ranches, cooperating experiment stations, etc., and in travel to remote sections of large stations. They are essential for collecting experimental data and materials necessary for facilitating research work.

Plant and Animal Disease and Pest Control: Replacement would be made of 115 of the 691 passenger motor vehicles of which approximately 90% are operated in daily farm-to-farm travel in the control and eradication of tuberculosis, brucellosis, sheep scabies, cattle tick fever, hog cholera, and various plant pest control programs. About 10% of these vehicles are operated in travel on animal and plant quarantine work.

They are frequently operated over rough and rugged roads in all kinds of weather. In order to keep them in safe and dependable operating condition, maintenance costs are frequently high. However, the control and eradication activities, testing and inspection cannot be carried on without them. In most cases, employees who own cars are reluctant to use them for even limited periods because of the hard usage to which they are subjected in this work.

The replacements recommended will make it possible for those cars to be replaced which are reaching inoperable condition.

Age and Mileage Data

The widely diversified research and regulatory activities and the varying nature of the areas in which cars are operated make it impractical to establish standards for car utilization on a mileage basis or on the basis of number of employees. Cars are a necessity for carrying workmen expeditiously to the scattered sites of testing, inspection and observation work.

Age and mileage data for passenger carrying vehicles on hand as of June 30, 1959:

<u>Age-Year</u> <u>Model</u>	<u>Age Data</u>		<u>Lifetime</u> <u>Mileage</u> (thousands)	<u>Mileage Data</u>	
	<u>Number of</u> <u>Vehicles</u>	<u>Percent</u> <u>of Total</u>		<u>Number of</u> <u>Vehicles</u>	<u>Percent</u> <u>of Total</u>
1951 or older	13	1	Over 100	6	1
1952	14	1	80-100	28	2
1953	34	3	60-80	171	14
1954	25	2	40-60	277	24
1955	112	10	20-40	350	30
1956	203	17	Under 20	346	29
1957	326	28			
1958	327	28			
1959	<u>124</u>	<u>10</u>			
Totals	1,178*	100		1,178	100

* Excludes 16 vehicles used in foreign countries.

AIRCRAFT

Additions

One additional small plane is requested for fiscal year 1961 to carry out responsibilities of the Plant Pest Control Division under the various programs, including aerial survey activities and supervisory activities necessary in connection with contract operations on aerial spraying programs. Six aircraft are now in use on plant pest control work; all are four-place observation planes purchased since 1953.

Present aircraft have not been adequate to take care of program requirements because of expansion of some activities, the increased use of aircraft on others, and the need for aircraft on more than one program at the same time.

All aircraft work requires precision application of insecticides. Plans indicate supervisory aircraft will be needed on a larger scale in fiscal year 1961 due to intensified aerial supervision.

In the past the rental of aircraft to perform this work has not proved satisfactory. On emergency programs, it often has been difficult to lease planes at the time and location where they were needed and, in many instances, they could be leased for only a definite period of time because of other commitments of the owners, making it necessary to search for a replacement plane to complete the operation. These difficulties deprive programs at critical times of essential pilot supervisor assistance. Perhaps the greatest difficulty in leasing aircraft stems from the fact that owners of this type of aircraft do not have them covered by Federal Aeronautics Administration low flying waivers. To obtain such waivers increases insurance rates. Also, most aircraft of this type are insured for use in specified geographic areas and the insurance is void if they operate in other areas. While leased aircraft are required to meet Federal Aeronautics Administration specifications, these aircraft are seldom in as good condition as the aircraft owned and maintained by the Federal Government and the margin of safety is often not as great as in Federally-owned aircraft.

Replacements

Authority is requested to replace a 1957 Cessna airplane (four-passenger), used for plant pest control activities, because of its excessive operating and repair cost. The new plane would be a four-place observation plane designed specifically for agricultural work.

EXTENSION SERVICE

Purpose Statement

Cooperative agricultural extension work was established by the Act of May 8, 1914, as amended by the Act of June 26, 1953 (7 U.S.C. 341-348), and the Act of August 11, 1955 (7 U.S.C. 347a). The legislation authorizes the Department of Agriculture to give, through the Land-Grant Colleges instruction and practical demonstrations in agriculture and home economics and related subjects and to encourage the application of such information by means of demonstrations, publications, and otherwise to persons not attending or resident in the colleges. Extension educational work is also authorized under the Agricultural Marketing Act of 1946 (7 U.S.C. 1621-1627).

Cooperative agricultural extension work is carried on by incorporating research results, technological advancements, and situation and program facts of the Department of Agriculture and the agricultural colleges and experiment stations into a national educational program.

State and county extension work is financed from Federal, State, county and local sources. These funds are used within the States for the employment of county agents, home demonstration agents, 4-H Club agents, State specialists and others who conduct the joint educational programs adapted to local problems and conditions.

The Federal Extension Service, as a partner in the cooperative extension effort, is responsible for administering Federal laws authorizing extension work and for coordinating the work among the States through cooperation with committees of State Directors and other means. The Administrator of this Service is also responsible for the coordination of all of the educational work of the Department.

On November 30, 1959, there were approximately 15,000 extension field agents and 238 Federal employees, 231 of whom were headquartered in Washington.

	<u>Appropriated, 1960</u>	<u>Budget Estimates, 1961</u>
Appropriated funds:		
Payments to States and Puerto Rico	\$53,715,000	\$56,580,000
Retirement costs for extension agents	5,674,375	5,961,000
Penalty mail	2,491,307	2,491,307
Federal Extension Service	2,242,540	2,392,660
Total, appropriated funds	<u>64,123,222</u>	<u>67,424,967</u>

Cooperative Extension Work, Payments and Expenses

	Payments to States, and Puerto Rico	Retirement Costs for Extension Agents	Penalty Mail	Federal Extension Service	Total
Appropriation Act, 1960 and base for 1961	\$53,715,000	\$5,674,375	\$2,491,307	\$2,242,540	\$64,123,222
Budget Estimate, 1961	<u>56,580,000</u>	<u>5,961,000</u>	<u>2,491,307</u>	<u>2,392,660</u>	<u>67,424,967</u>
Increases	<u>+2,865,000</u>	<u>+286,625</u>	<u>- -</u>	<u>+150,120</u>	<u>+3,301,745</u>

SUMMARY OF INCREASES, 1961

Payments to States, and Puerto Rico:

For payments for cooperative agricultural extension work under Sec. 3(c) of the Smith-Lever Act to strengthen and expand extension work with disadvantaged agricultural families +2,865,000

Retirement costs for extension agents:

To provide for employer's share of Federal contributions to the retirement fund for cooperative extension agents pursuant to Public Law 854 +286,625

Federal Extension Service:

To strengthen the Federal staff of the Extension Service to meet increased responsibilities resulting from intensified extension programs and to provide national leadership in subject-matter areas not now covered +137,420

For employee health benefit costs pursuant to Public Law 86-382 +12,700

Subtotal +150,120

Total increase, Cooperative extension work, payments and expenses +3,301,745

PROJECT STATEMENT

Project	1959	1960 (estimated)	Increase		1961 (estimated)
			Health Bene- fit Costs (P.L. 86-382)	Other	
1. <u>Payments to States:</u>					
<u>and Puerto Rico:</u>					
a. Payments for					
cooperative agri-					
cultural extension:					
work under the					
Smith-Lever Act	\$51,664,652	\$52,220,000	- -	+\$2,865,000(1)	\$55,085,000
b. Payments and					
contracts under					
the Agricultural					
Marketing Act ...	1,493,764	1,495,000	- -	- -	1,495,000
2. Retirement costs					
for extension					
agents	5,366,075	5,674,375	- -	+286,625(2)	5,961,000

(Continued on next page)

Project	1959	1960 (estimated)	Increase		1961 (estimated)
			Health Bene- fit Costs (P.L. 86-382)	Other	
3. <u>Penalty mail (for extension agents and State extension directors)</u>	2,491,307	2,491,307	- -	- -	2,491,307
4. <u>Federal Extension Service</u>	2,238,927	2,242,540	+\$12,700	+137,420(3)	2,392,660
Subtotal a/	63,254,725	64,123,222	+12,700	+3,289,045	67,424,967
Unobligated balance ..	464,352	- -	- -	- -	- -
Total employee health benefit costs (P.L. 86-382)	[- -]	[- -]	[+12,700]	[+534]	[13,234]
Total available or estimate	63,719,077	64,123,222	+12,700(4)	+3,289,045	67,424,967
Transferred from "Conservation reserve program, Commodity Stabilization Service" ...	-559,682				
Total appropriation ..	63,159,395				

a/ Represents obligations. Applied costs for 1959 are \$63,219,528. The difference of \$35,197 reflects, primarily, the decrease in contractual services and equipment used in 1959 below contracts made and orders placed in that year. Applied costs for 1960 are \$64,234,318. The difference of \$111,096 is primarily the excess of contractual services and equipment to be used in 1960 over contracts to be made and orders placed.

INCREASES

The increase of \$3,301,745 under the appropriation "Cooperative extension work, payments and expenses" for 1961 consists of the following:

(1) An increase of \$2,865,000 for payments for cooperative agricultural extension work under section 3(c) of the Smith-Lever Act.

Need for Increase: A by-product of the technological revolution underway in agriculture, as well as in the rest of our economy, is a high percentage of our farm families being unable to attain a reasonable level of living from the use of their currently available agricultural resources. Their farms are too small, the soil too poor, and availability of or knowledge of other sources of income currently too limited to enable them to either maintain an adequate level of living or contrivute to the welfare of their communities and the Nation to the extent they desire. In recent years over half of the Nation's farms produced less than 10 percent of the farm products for market. Although some of these can attain to reasonably adequate farming operations, others will of necessity have to depend largely upon other sources of income, preferably

in their own or near-by communities. Many will need additional training to equip them for additional employment. Most of the agricultural programs and many of the existing public services are not meeting the needs of these small and part-time farmers.

In 1955 the Rural Development Program was launched on a demonstrational basis to encourage and to facilitate the cooperation of all interest groups in areas of concentrated underemployment of rural people to capitalize upon additional possible income producing enterprises, to improve those already existing, and to improve essential services.

Executive Order 10847, issued October 1959, formally established the Committee for Rural Development Program. Members of the Committee include the Under Secretary of Agriculture, Chairman; the Under Secretary of the Interior; the Under Secretary of Commerce; the Under Secretary of Labor; the Under Secretary of Health, Education and Welfare; the Administrator of the Small Business Administration; and a member of the Council of Economic Advisers, designated by the Chairman of the Council. The seven-man Committee, which has been functioning informally since the program was initiated, will direct its activities toward providing leadership and uniform policy guidance to the several Federal departments responsible for rural development functions and related activities so that they may take more effective and concerted actions in carrying out those functions and activities and cooperate more effectively with non-Federal participants, both private and Governmental, in the program.

By 1959, thirty States and Puerto Rico had such pilot efforts underway in 63 counties and 9 areas affecting approximately 200 counties. Committees of lay volunteer leaders were organized to carry the responsibility. However, they were supported by local representatives of Federal and State agencies and private groups in a position to counsel, provide information and to the extent feasible, coordinate and adjust their own program efforts better to meet the particular needs of each of these areas. In all instances, extension service representatives were assigned to provide organizational and operational leadership for these local committees in these demonstrations. The initiative, leadership and hard work of various groups, farm, business, industry, civic, school church, service clubs, and others have produced tangible results far in excess of expectations. Examples are hundreds of projects to improve farms and farming; new market facilities and more profitable market outlets established; forests improved and wood finishing and wood processing industries expanded; thousands of new job opportunities created by local industrial growth; and more income from a variety of other local activities. In general, the procedure has been to provide assistance to individual families and to communities, helping them to evaluate their resources, to establish goals, and to develop and carry out programs to attain these goals.

Experience in this trial effort over the past 4 years clearly reveals that with a minimum, but strategically important, leadership assistance, such lay groups, working together to analyze their problems and opportunities and developing practical means of capitalizing on the latter, can do much to improve the welfare of the residents of these rural areas of concentrated underemployment and low family income. Likewise out of this 4 years of experience the more effective ways to stimulate, support, and service these key volunteer groups have been tested and proven. In view of the fact that practically every State has some areas characterized by inadequate farms, low farm income

and need for the development of non-farm sources of income and improved services, it is proposed that this type of program be expanded through providing additional funds to the Extension Service on a matching basis under Section 3(c) of the Smith-Lever Act, as amended, thus enabling this Service to provide the necessary leadership to expand this program in areas of need.

Plan of Work: The proposed increase of \$2,865,000 would be used to provide matching payments to States and Puerto Rico under the Smith-Lever Act, Section 3(c) primarily to strengthen and expand Extension's leadership responsibility in Rural Development type programs in disadvantaged rural areas. The States will assign additional staff at the county or area level, and to a limited degree at the State level, where it is determined that a need exists. Other program and staff adjustments will be made by the State extension services to the extent possible, to further support and expand rural development type programs. The Federal Extension Service will work closely with the State extension services with special emphasis upon the most effective methods of inaugurating and supporting rural development programs, developing an understanding of additional sources of information and assistance essential to productive work, and improving coordination and liaison among the various organizations, agencies, and groups in a position to contribute effectively to the success of these programs.

Table I shows allotments to States and Puerto Rico on the basis of rural and farm population for the proposed increase for 1961.

(2) An increase of \$286,625 for Federal contribution to the retirement fund for cooperative extension agents pursuant to Public Law 854.

Cooperative extension agents are joint employees of the United States Department of Agriculture and the cooperating land-grant institutions. They hold appointments under Civil Service Commission Regulation A-6, III(a)(1). Such appointments place them under the provisions of the United States Civil Service Retirement Act, with employee contributions and benefits based on total salary received from the cooperating partners. The employer's contribution to the Federal retirement fund, to match contributions of these agents, is provided by Federal appropriation to the Federal Extension Service.

Based on anticipated salary adjustments during fiscal year 1960 reflected in estimates obtained from the States, the 1960 appropriation of \$5,674,375 will be required for the employer's matching retirement costs for fiscal year 1960.

It is estimated that 80% of the \$2,865,000 Federal increase in payments to States funds requested for 1961 and 70% of the anticipated increase in State and county contributions of \$3,000,000 for 1961 will be used for salaries of personnel subject to the Retirement Act. Applying the 6.5% employer's retirement contribution to the combined increase results in the additional Federal contribution requirement of \$286,625. This increase together with currently available funds for this purpose will total \$5,961,000, the amount estimated to be necessary to cover the employer's matching retirement costs for 1961.

(3) An increase of \$137,420 to strengthen the Federal staff of the Extension Service and provide for necessary operating expenses.

Need for Increase: To be effective in carrying out the total Cooperative Extension Service effort, the Federal Extension Service must maintain a staff of

experienced and well-trained personnel, technically qualified in administrative and program fields. This staff in its working relationships with the States has the responsibility to provide maximum flexibility among the States to meet local problems, yet achieve a unity of purpose by promoting efficient work methods, use of modern programming and teaching techniques and other administrative and program assistance to meet the needs common to all States. It works toward adjusting programs and extension methods to the ever-changing needs and problems of people.

The universal problem of lag in time between the discovery of usable information and its application coupled with rapidly advancing technology, increasing capital requirements, vexing marketing problems, growing needs for soil and water conservation and changing needs of young people must be met by effective extension educational programs.

Plan of Work: The proposed increase of \$137,420 will be used to strengthen the Federal staff of the Extension Service and provide for necessary operating expenses to meet increased responsibilities resulting from intensified extension programs in the States and Puerto Rico and to provide national leadership in subject-matter areas not now provided. With increased Federal research, there is a need for closer liaison with research agencies for both programs and subject-matter. The increase includes provision for:

A field Representative to assist the Administrator in representing the Department in working with Presidents, Deans, and Directors in the Land-Grant Colleges and Universities on administration, organization, policies and relationships. The turnover in State directors and other Land-Grant College officials and increasingly complex administrative problems in the past few years requires an intensive effort on the part of the Federal Extension Service and the Department to maintain effective working relations at the President, Dean and Directors' level in order to develop and maintain efficient extension services in the States.

An Extension Rural Development leader to (1) assist the Administrator in (a) representing the Extension Service in working with the Committee for Rural Development Program and intradepartmental committees and agencies in furtherance of the Rural Development Program and to maintain continuing liaison and effective coordination of effort at this level, (b) providing additional leadership and counsel of the States in further strengthening Extension's contribution in expanding the Rural Development Program, becoming familiar with and utilizing the best procedures developed in the demonstration efforts to date, and exploring promising additional procedures and techniques, and (c) providing coordination of effort as among the States; and (2) ascertain State needs and provide the leadership in assembling and making available information needed by the States in Rural Development work, including the providing of appropriate teaching aids.

An Internal Auditor needed to provide a more adequate and continuous program of examination, review, and appraisal of State Extension Service operations to assist State Extension Directors and the Administrator to carry out their responsibilities for efficient, effective and economical administration of extension programs and to be assured

that funds available for Federal Extension Service operations and allocated to States are expended in accordance with the provisions of the Smith-Lever Act and other Federal requirements.

A program leader in Plant Pathology to assist the State Extension Services in incorporating into their program the latest findings in disease resistant varieties, chemical thinning of plants and trees, control of plant diseases and problems resulting from spray residue. Close working relationships need to be maintained with the Agricultural Research Service and with the Food and Drug Administration to keep informed as to the latest research data and regulations dealing with plant diseases and their control, and to promote prompt application of research information as it becomes available as well as reduce the time lag in the application of currently known information.

A program leader in Poultry Marketing to serve as national leader of educational programs on the marketing and utilization of poultry and eggs and furnishing technical guidance to the State extension services in planning, organizing, and conducting educational and demonstrational work in this area.

A Communications Training leader to strengthen national communications programs and develop a balanced communications training program to meet the need for modernizing and reviewing such programs; to keep extension programs current with changes in audiences, in communications technology, and in the educational approach through new research developments; and to encourage the use of mass media.

A 4-H Club leader to strengthen 4-H Club work throughout the United States and to develop and coordinate up-to-date State and county programs for young people with particular emphasis on the development of projects which would assist farm and rural youth in gaining information on career opportunities.

(4) An increase of \$12,700 is required to meet employee health benefit costs under Public Law 86-382, applicable to the base for 1961. A full explanation of the health benefit cost estimates appears in the "Preface" at the beginning of the Explanatory Notes.

CHANGES IN LANGUAGE

The estimates include proposed changes in the language of this item as follows (deleted mater enclosed in brackets):

Payments to States[,Hawaii,] and Puerto Rico: For payments for cooperative agricultural extension work * * * Provided, That funds hereby appropriated pursuant to section 3 (c) of the Act of June 26, 1953, shall not be paid to any State [,Hawaii,] or Puerto Rico prior to availability of an equal sum from non-Federal sources for expenditure during the current fiscal year.

Federal Extension Service: For administration * * * and to coordinate and provide program leadership for the extension work of the Department and the several States [,Territories,] and insular possessions * * *

These changes in language are a result of the proposal to delete the words "Hawaii" and "Territories" from this appropriation language since Hawaii has now become a State.

PAYMENTS TO STATES AND PUERTO RICO

Federal funds available for fiscal year 1960 for cooperative agricultural extension work within the States and Puerto Rico under the Smith-Lever Act, as amended (\$52,220,000), and for carrying out the provisions of the Agricultural Marketing Act (\$1,495,000) total \$53,715,000.

Payments to the States and Puerto Rico are made directly to designated officers and the funds are disbursed by them in accordance with budgets and programs of work submitted by the State directors of extension and approved by the Administrator of the Federal Extension Service on behalf of the Secretary of Agriculture. As reflected on Table II, at present slightly more than 38% of the cost of extension work is being financed from Federal sources and about 62% from State and local sources. The funds are used by the States for the employment of extension workers to carry on cooperative agricultural extension work. Paid extension workers are being assisted by a network of voluntary neighborhood leaders who cooperate in carrying out extension programs.

The use of these funds is indicated in greater detail in the following tables: Table I reflects estimated allotments to the States and Puerto Rico on the basis of rural and farm population. Table II indicates the sources of funds allotted for cooperative extension work in the States and Puerto Rico for 1960, including allotments under the Agricultural Marketing Act. Table III shows estimated direct payments to and contracts with States and Puerto Rico for 1961, indicating those which require offset from State and local funds, those where such offset is not required, and the basis of allotment. Table IV indicates the various classes of field agents employed with extension funds.

EXTENSION SERVICE APPROPRIATIONS

FOR THE STATES AND PUERTO RICO

Table I

	1960	INCREASES OR DECREASES 1961	TOTAL PROPOSED FOR 1961
Payments to States based on rural and farm population Smith-Lever Act, Sec. 3(b) & 3(c)2:			
Alabama	\$ 1,851,955	\$ 96,636	\$ 1,948,591
Alaska	76,288	2,435	78,723
Arizona	248,962	12,635	261,597
Arkansas	1,511,604	76,667	1,588,271
California	1,298,295	85,091	1,383,386
Colorado	465,504	23,378	488,882
Connecticut	267,098	14,927	282,025
Delaware	127,332	4,871	132,203
Florida	608,229	36,930	645,159
Georgia	1,934,603	100,733	2,035,336
Hawaii	244,359	10,056	254,415
Idaho	352,210	17,677	369,887
Illinois	1,573,383	91,479	1,664,862
Indiana	1,308,503	76,496	1,384,999
Iowa	1,414,934	78,100	1,493,034
Kansas	950,061	47,473	997,534
Kentucky	1,826,811	100,705	1,927,516
Louisiana	1,206,636	61,913	1,268,549
Maine	344,712	18,307	363,019
Maryland	486,084	28,335	514,419
Massachusetts	378,637	23,207	401,844
Michigan	1,434,798	85,492	1,520,290
Minnesota	1,354,690	75,292	1,429,982
Mississippi	1,906,248	100,476	2,006,724
Missouri	1,601,279	86,265	1,687,544
Montana	348,623	15,843	364,466
Nebraska	796,314	39,365	835,679
Nevada	96,199	2,464	98,663
New Hampshire	180,613	8,538	189,151
New Jersey	373,690	22,748	396,438
New Mexico	318,786	15,872	334,658
New York	1,358,175	86,093	1,444,268
North Carolina	2,485,962	143,823	2,629,785
North Dakota	543,683	25,499	569,182
Ohio	1,785,831	107,180	1,893,011
Oklahoma	1,278,842	58,102	1,336,944
Oregon	506,953	30,283	537,236
Pennsylvania	1,781,173	116,434	1,897,607
Puerto Rico	1,577,470	92,396	1,669,866
Rhode Island	98,853	3,751	102,604
South Carolina	1,337,916	72,485	1,410,401
South Dakota	544,492	25,011	569,503
Tennessee	1,848,794	102,624	1,951,418
Texas	2,955,187	143,909	3,099,096
Utah	235,091	10,973	246,064
Vermont	226,227	10,515	236,742
Virginia	1,505,085	84,603	1,589,688
Washington	629,872	37,302	667,174
West Virginia	932,821	55,466	988,287
Wisconsin	1,349,880	76,753	1,426,633
Wyoming	182,444	6,790	189,234
Subtotal	50,052,691	2,750,400	52,803,091
Special need funds Sec. 3(b) & 3(c)1 of Smith-Lever Act	1,277,309	114,600	1,391,909
Smith-Lever Act, Sec. 8 funds	890,000	-	890,000
Agricultural Marketing Act funds (including contracts)	1,495,000	-	1,495,000
Total Payments & Contracts	53,715,000	2,865,000	56,580,000
Retirement Costs: Federal share of retire- ment costs for cooperative extension employees	5,674,375	286,625	5,961,000
Penalty Mail: Reimbursement to Post Office for penalty mail for Extension Service	2,491,307	-	2,491,307
Grand Total	\$ 61,880,682	\$ 3,151,625	\$ 65,032,307

TABLE II.

U. S. DEPARTMENT OF AGRICULTURE

FEDERAL EXTENSION SERVICE

SOURCES OF FUNDS ALLOTTED FOR COOPERATIVE EXTENSION WORK IN THE STATES AND PUERTO RICO
FOR THE FISCAL YEAR ENDING JUNE 30, 1960

STATES	GRAND TOTAL	TOTAL FEDERAL FUNDS	TOTAL WITHIN STATES	FUNDS FROM FEDERAL SOURCES		STATE AND COLLEGE	COUNTY	NON-TAX
				AMENDED SMITH-LEVER	AGRICULTURAL MARKETING ACT (AMA)*			
Alabama	\$ 3,737,241	\$ 1,896,106	\$ 1,841,135	\$ 1,871,356	\$ 24,750	\$ 1,093,600	\$ 747,535	\$ --
Alaska	230,640	107,993	122,647	105,493	2,500	122,647	--	--
Arizona	930,575	348,662	581,913	346,662	2,000	515,683	66,230	--
Arkansas	3,239,847	1,591,603	1,648,244	1,569,603	22,000	1,187,729	397,055	63,460
California	6,853,109	1,376,895	5,476,214	1,325,295	51,600	4,032,498	1,406,816	36,900
Colorado	1,629,706	557,564	1,072,142	533,564	24,000	554,829	516,393	920
Connecticut	918,840	275,098	643,742	267,098	8,000	375,624	256,083	12,035
Delaware	350,929	160,181	190,748	136,181	24,000	168,748	3,100	18,900
Florida	2,694,661	630,957	2,063,704	622,207	8,750	1,221,032	842,672	--
Georgia	4,709,096	2,058,289	2,650,807	2,010,289	48,000	1,526,060	1,093,847	30,900
Hawaii	927,119	262,359	664,760	244,359	18,000	664,760	--	--
Idaho	1,389,942	400,409	989,533	394,209	6,200	640,583	319,900	29,050
Illinois	3,938,479	1,608,083	2,330,396	1,581,083	27,000	1,883,425	--	446,971
Indiana	3,766,927	1,371,702	2,395,225	1,326,702	45,000	1,200,656	1,130,694	63,875
Iowa	4,364,177	1,458,934	2,905,243	1,444,934	44,000	1,323,119	1,582,124	--
Kansas	3,862,446	1,024,561	2,837,885	989,561	35,000	763,043	2,006,847	67,965
Kentucky	3,516,685	1,942,286	1,574,399	1,895,286	47,000	972,000	600,000	2,399
Louisiana	3,961,156	1,307,599	2,653,557	1,260,599	47,000	2,340,860	301,637	11,060
Maine	840,117	374,290	465,827	359,290	15,000	317,897	147,930	--
Maryland	2,197,708	538,274	1,659,434	492,274	46,000	1,287,018	372,416	--
Massachusetts	1,629,589	423,637	1,205,952	378,637	45,000	444,285	791,667	--
Michigan	4,792,575	1,611,898	3,180,677	1,471,898	140,000	2,239,500	893,711	47,466
Minnesota	2,868,137	1,418,031	1,450,106	1,389,881	28,150	691,356	745,000	13,750
Mississippi	4,083,591	2,005,247	2,078,344	1,975,247	30,000	1,236,450	804,998	36,896
Missouri	3,895,521	1,773,232	2,122,289	1,706,232	67,000	1,157,644	812,999	151,646
Montana	1,457,765	451,855	1,005,910	444,855	10,000	533,886	460,399	11,625
Nebraska	2,134,068	856,114	1,277,954	843,614	12,500	767,954	510,000	--
Nevada	495,380	176,799	318,581	176,799	--	218,013	100,568	--
New Hampshire	590,734	189,112	401,622	180,612	8,500	251,928	145,294	4,400
New Jersey	1,848,178	390,190	1,457,988	373,690	16,500	829,336	628,652	--
New Mexico	1,273,533	449,060	824,473	425,300	23,760	628,987	195,486	--
New York	6,684,761	1,393,108	5,291,653	1,358,174	34,934	2,164,889	2,751,051	375,713
North Carolina	6,808,089	2,628,560	4,179,529	2,542,560	86,000	2,671,413	1,508,116	--
North Dakota	1,353,458	617,633	735,825	602,683	14,950	295,614	440,211	--
Ohio	3,807,616	1,844,440	1,963,206	1,807,110	37,000	1,073,864	830,832	58,510
Oklahoma	3,710,372	1,395,842	2,314,530	1,338,842	57,000	1,671,716	622,670	20,144
Oregon	2,963,953	613,442	2,350,511	571,942	41,500	1,828,157	522,354	--
Pennsylvania	3,827,047	1,812,974	2,014,073	1,792,974	20,000	1,464,073	550,000	--
Puerto Rico	2,581,715	1,592,715	989,000	1,592,715	--	989,000	--	--
Rhode Island	270,086	102,854	167,232	98,854	4,000	138,623	24,325	4,284
South Carolina	2,534,998	1,391,688	1,143,310	1,384,188	7,500	987,800	148,670	6,840
South Dakota	1,516,200	581,993	934,207	580,493	1,500	685,600	240,000	8,607
Tennessee	3,444,501	1,932,553	1,511,948	1,906,553	26,000	980,000	531,948	--
Texas	6,837,895	3,114,910	3,722,985	3,099,710	15,200	1,674,094	2,048,091	800
Utah	935,731	327,912	607,819	310,891	17,021	449,500	158,319	--
Vermont	714,992	249,227	465,765	238,227	11,000	342,640	123,125	--
Virginia	4,112,618	1,549,669	2,562,949	1,525,069	24,600	2,030,310	520,000	12,639
Washington	2,310,367	729,157	1,581,210	710,472	18,685	965,938	615,272	--
West Virginia	1,739,678	975,371	764,307	966,771	8,600	470,082	290,125	4,100
Wisconsin	3,823,536	1,419,881	2,403,655	1,381,881	38,000	1,176,652	1,227,003	--
Wyoming	845,358	284,095	561,263	279,795	4,300	362,523	198,740	--
Unallotted	19,986	19,986	--	19,986	--	--	--	--
AMA Contracta	100,000	100,000	--	--	100,000	--	--	--
GRAND TOTAL	\$ 140,071,398	\$ 53,715,000	\$ 86,356,398	\$ 52,220,000	\$ 1,495,000	\$ 53,583,638	\$ 31,230,905	\$ 1,541,855

* Preliminary Distribution.

Table III. Statement of direct payments to and contracts with States and Puerto Rico, indicating those requiring offset, those not requiring such offset, and basis of distribution as estimated for 1961.

Item	Total Estimate 1961	Basis of Allotment	Amount paid without offset	Amount requiring offset
Payments to States and Puerto Rico ..	\$55,085,000:			
Smith-Lever Act				
Section 3(b)		\$31,597,279-Frozen by Sec. 3(b) of Public Law 83.	\$14,513,808:	\$17,083,471
		\$300,000-for Puerto Rico; specified by law		300,000
Section 3(c)		\$22,297,721 (\$10,702,906-Farm pop.) (\$10,702,906-Rural pop.) (\$891,909-Special needs)		22,297,721
Section 8		\$890,000-Rural Development; on basis of special needs	890,000:	
Payments and contracts under the Agricultural Marketing Act	1,495,000:	\$1,495,000-Basis of approved projects and contracts	1/ 100,000:	1,395,000
Total, direct Federal payments ..	56,580,000:	56,580,000	15,503,808:	41,076,192

1/ Regional marketing contracts.

Table IV. Cooperative extension agents, by organization classes.

Extension Workers by Organization Classes	June 30, 1957	June 30, 1958	June 30, 1959
<u>STATE WORKERS:</u>			
Directors and administrative personnel	195	202	212
Specialists	2,368	2,528	2,496
Total, State staff	2,563	2,730	2,708
<u>COUNTY WORKERS:</u>			
Supervisors	746	747	730
Agricultural agents (a)	6,951	7,064	6,993
Home Economics agents (a)	4,053	4,271	4,273
Total, county staff	11,750	12,082	11,996
<u>GRAND TOTAL</u>	<u>14,313</u>	<u>14,812</u>	<u>14,704</u>

(a) Includes 4-H Club agents

REVISED PROCEDURE FOR DISBURSING FUNDS TO STATES

Heretofore, as a matter of administrative practice, any unexpended balance in Section 3 Smith-Lever funds held by the States at the end of the fiscal year was retained by them but the allocation from the current appropriation was reduced by the amount of the balance. The effect of this procedure was that an amount equal to the unexpended balances of the States remained unobligated and reverted to the Surplus Fund of the Treasury.

Observation and experience in administering the cooperative extension program over the years have led to an administrative decision, effective with the close of the fiscal year 1960 to discontinue withholding from the new year's allocation the amount of the unexpended balance remaining in the State. This would make funds disbursed under provisions of Section 3 of the Smith-Lever Act available to the States until expended.

This administrative change is in keeping with a decision of the Comptroller General (15 C.G. 1077). This decision, relating to grants to States by another agency, states "... the fiscal year limit goes only to the period during which the amounts may be disbursed to the States and to the District of Columbia, after which disbursement the funds are available until expended ...". The revised procedure will permit program operations to be planned over a longer period of time with greater stability, resulting in more effective and efficient use of total funds available for cooperative extension work.

Under the proposed operating procedure, the States would report the amount of the balance and certify that it was or was not the result of failure to meet matching requirements. If all or part of the balance is a result of inability to match, the State would be required to return that amount to the U. S. Treasury.

If the balance is not the result of inability to match, the State may use it in the subsequent year for expenditures in furtherance of approved cooperative extension work, subject to the rules and regulations applicable to the new year's allocation of Section 3(c) funds, including the matching requirements set forth in the appropriation act.

STATUS OF PROGRAM

General: Cooperative extension work in agriculture and home economics is out-of-school education, conducted by the Land-Grant colleges in cooperation with the Department of Agriculture and State and county governments. The extension program is directed to the needs of farm and other people who desire counsel and assistance in understanding and applying the results of agricultural and home economics research.

Program Emphasis Shifted to Meet Changing Needs: Changes in the conditions and situations facing farm and other rural people in recent years have resulted in corresponding changes in the problems, the needs and demands of the people served by the Cooperative Extension Service. Such factors as the declining number of farms, the rapid application of improvements in farming, larger capital requirements, the increasing number of complex problems faced in farm and home management, growing off-farm employment and both declining and expanding rural communities have required shifts in extension program emphasis and in methods used to reach people. Hence, the current extension program is giving more attention to efficiencies in farm production and marketing of farm products, more skillful farm management, community resource development and public affairs education. The home economics phase of the extension program is directed toward skillful family purchasing and to management of family income and to sound nutrition as well as improved child care and family health. The 4-H Club program is giving particular attention to projects that develop a greater understanding and appreciation among youth for science including economics and other social sciences.

Extension Reaches Broad Cross-section of Nation: Translating this work into specific activities for 1958, extension agents served 2,250,000 boys and girls enrolled in 4-H Club work, made 23,000,000 personal contacts, wrote 781,000 news articles, distributed 32,800,000 bulletins, made 288,000 radio broadcasts and 19,000 television programs.

The State Extension Services, in consultation with local people, have primary responsibility for determining county and State programs and shifts in these programs in consonance with the changing needs.

The Federal Extension Service administers the nationwide educational program through the Land-Grant colleges and universities under Federal laws governing this work. As coordinator of the Department's educational work, it provides national leadership to insure a constructive program integrated with the educational work of the States and counties. In doing this Extension utilizes many resources, including research findings, experience, other departments of Government, farm, civic, and business organizations and groups, so that national effort of significance is coordinated with extension work in each State and Puerto Rico.

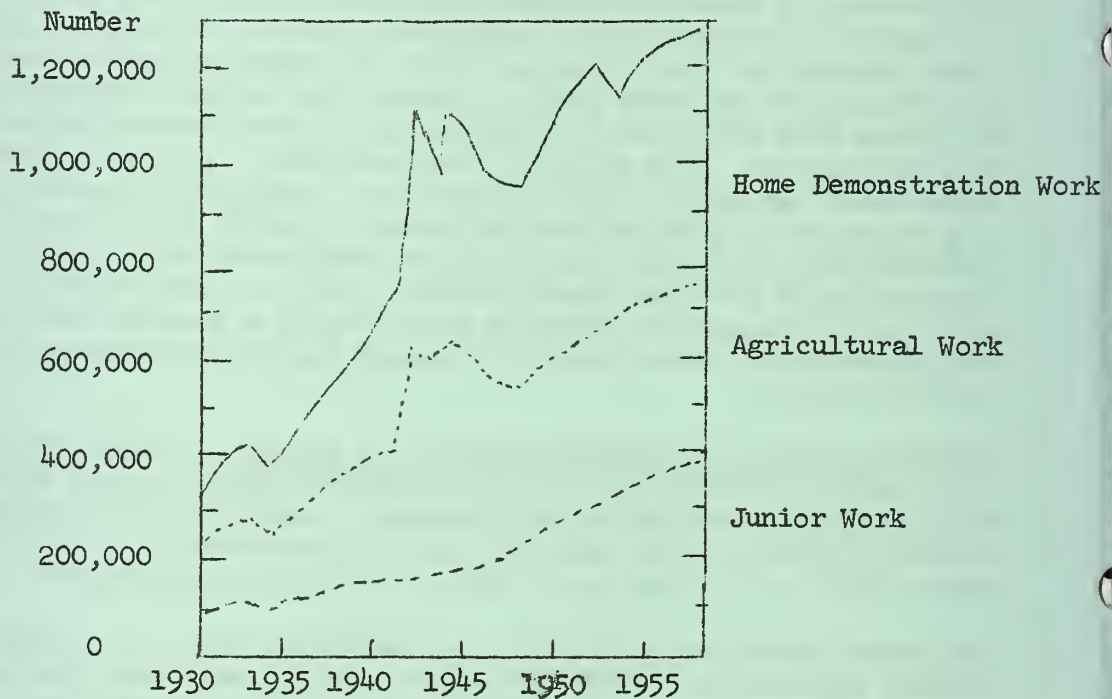
Fig. 6-10 Program Influences

I. Important Program Influences:

- A. Voluntary Local Leaders Carry Much of Extension Load: In 1958 extension agents were assisted by more than 1,280,000 volunteer leaders who conducted meetings with more than 20,000,000 attendance (Exhibit A). The average local leader devotes at least 11 days annually to leadership activities. For the Nation, this would equal more than 54,200 persons employed for a full year of 260 work days or 5 times the total paid county extension personnel.

EXHIBIT A

Voluntary local leaders



- B. Extension Work with Consumers: Extension reports have reached an increasing number of consumers in urban areas through the effective use of mass media. Consumers have been provided information on the quantity and quality of agricultural products coming to market. This information helps move greater quantities of agricultural products while in large supply thus maintaining a better price. It helps consumers shop more efficiently in meeting their families food needs.

- C. Meeting the Requests for Assistance: Because of differing economic and population patterns throughout the Nation, the allocation of Extension Service resources must be determined with care so that problems of major importance can be given priority. Extension programs have been given continuous study. One of the major results was the release in April 1958 of the report "The Cooperative Extension Service Today." To build on this foundation, nine task force groups were organized and produced a report in July 1959 which will be used (1) to focus discussions on extension programs by both extension staff and those outside the Extension Service with vital interest in extension education and (2) to aid in redirecting program effort.

II. Selected Examples of Recent Extension Accomplishments:

- A. Farm and Home Development--The 'Unit Approach': Today's agricultural scene is one of high cash operating costs, large investment and risk, rapidly changing technology, and increasing production efficiency. Coupled with these changes are off-farm influences over which farmers have little or no control. Management errors in dealing with any one of these forces can be ruinous. Experience with farm families shows a wide variation in the income attained by families with similar resources. This variation is largely accounted for by differences in the ability to make and carry out decisions and long range plans in operation of the farm and home.

To meet this situation, Extension has expanded the teaching method known as "Farm and Home Development" which affords an opportunity to work with the farm and home as a unit in the decision-making process, as well as to emphasize a systematic appraisal of alternative solutions to changing economic problems. About 144,000 farm families are receiving this more intensive educational assistance. In 1958, 73% of the counties were working with this method. One-fourth of the families began to develop a combined farm and home plan during the year. One out of every six families reached the point where they could go on with the plan without special extension assistance. The value of this work is demonstrated by the results it produces. Some examples follow:

In Indiana each of the 3,000 families participating in the program is keeping a careful farm and home record. An analysis of the first 200 farms on which complete reports have been compiled shows an increase in cash income of \$1,700 per farm over last year. The average for all farm families in Indiana was \$113 over 1957. For this particular method of extension work

and under Indiana conditions it appears that for every dollar expended on Farm and Home Development the farm co-operators increased their cash income by \$10, and were able to pay back to the Treasury about \$2 additional income tax.

Wisconsin: The gross income of the non-participating farm families went down somewhat during the two-year period 1957-58, whereas the gross income of the participating families increased almost \$2000 during the same experimental period. A group of farmers in Crawford County, working with the extension agents, studied their farm business in 1955 and decided on improvements in operations. They continued their practice and report labor income as follows: 1955-\$2478; 1956-\$3241; 1957-\$3605; 1958-\$4955.

Texas: About 2,400 families participated in Farm and Home Development during 1958 of which more than half (57%) took a farm inventory that showed an average net cash increase of \$1,623.

Michigan: The average net income of the participating group of farmers in one township receiving intensive extension assistance increased from \$2,804 to \$5,270 over a three year period (1953-1956), and this at a time when there were general decreases for U. S. farmers.

In Bay County, participating families have made great progress. The change in net income which has taken place under Farm and Home Development by a family consisting of the farmer, his wife and 5 children under 11 years of age is reflected in their net income for the past several years as follows:

1952	\$2702
1953	3615
1954	3283
1955	4753
1956	4883

Tennessee finds the unit test-demonstration farm a most successful extension tool to demonstrate efficiency in agricultural production and management. These farms have discovered the way to better fertilizer use, and emphasized the value of forage in promoting a livestock program to supplement cash crops. Hay and forage crops have replaced corn on the hillsides and fertilization of pasture has enabled farmers to utilize larger percentages of their land. In a ten-year period permanent pasture, rotation, and winter pasture acreage increased 31.8%; acres required per productive animal unit decreased from 2.4 acres to less than 2.

Total animal units increased 63%. During the period from 1939 to 1954 fertilizer use increased from 136,971 to 534,310 tons, or 290%. As net incomes increased, more emphasis was placed upon the home as a part of the farm unit, thus incorporating both the farm and home as a management unit.

- B. The Rural Development Program Aids Farm Families: This program has added another dimension to the development of extension work. It originated as a special effort for directing more resources, skills, and services into effective programs for families on small, low-production farms. Many small commercial and part-time farmers on low production units are not benefiting as they might from recent technological changes in agriculture. About 56% of the nation's farms produce less than 10% of the marketed farm products. There are over 1,000 counties, about one-third of all counties in the United States, where there are serious under-employment, low incomes, and unsatisfactory levels of living. This program's long-range effort is helping underemployed farm people increase their income and improve the economy of their areas. During fiscal year 1959 the Extension Service increased its efforts to give guidance and assistance to this program. Exhibit "B" shows the areas where this program is being conducted. Although many governmental and private agencies and groups participated, the Extension Service provided the organizational and action leadership in addition to adjusting its regular program efforts to fit more nearly the dominant developmental needs of these pilot areas.

The program has enlisted the active and enthusiastic support of farm, business, civic and other local leaders who are working together as a team, with the assistance of locally designated extension workers, to bring about economic and other improvements essential to the welfare of the underemployed rural residents of these areas. These efforts have resulted in more job opportunities, better farming methods, improved marketing facilities and procedures, better adapted vocational training, improved vocational counseling and placement services, better health facilities and their more widespread use, and a number of other developments of vital significance to the areas concerned.

In addition, the Extension Services, through their regular programs, adapted to the more prominent needs and opportunities in these areas, have been able to encourage a significant number of farm families to produce specialty crops in volume adequate to insure a good market outlet; to enlarge their current operating units through rental or other means; to modernize their farming practices; to improve the quality of their products in order to command a higher price; to improve their family living conditions and home-produced food supplies; and to engage in combined efforts for community

improvement. Examples of accomplishments, typical of developments in most of the counties, follow:

Green tomato production was expanded to 1200 acres in two counties in Alabama. In Franklin Parish, Louisiana, 100 families produced and marketed about 200 acres of sweetpotatoes.

New industries were established or enlarged in Indiana, Mississippi, Missouri, North Carolina, and other States.

New marketing facilities for farm products were developed in Louisiana, Mississippi, Georgia, North Carolina and Minnesota.

New vocational training programs were started in Kentucky, Illinois, New Mexico, Oklahoma and Tennessee.

The methods of assistance varied. For instance:

In Hubbard County, Minnesota, within a year after the rural development agent started work on this project, the local people had organized themselves into eight operating committees. One, the farm management committee, developed the idea for a pig market. This "invisible" pig market is having some plain-to-see results. It is invisible in that there are no stockyards, holding pens, market-owned trucks or cattle cars. Instead, the market is a listing service for farmers who have pigs to sell with a local office keeping a listing of buyers who go out to the farms to do business. This rural development project succeeded in selling 2,000 little pigs, worth about \$25,000, in its first nine months of operation.

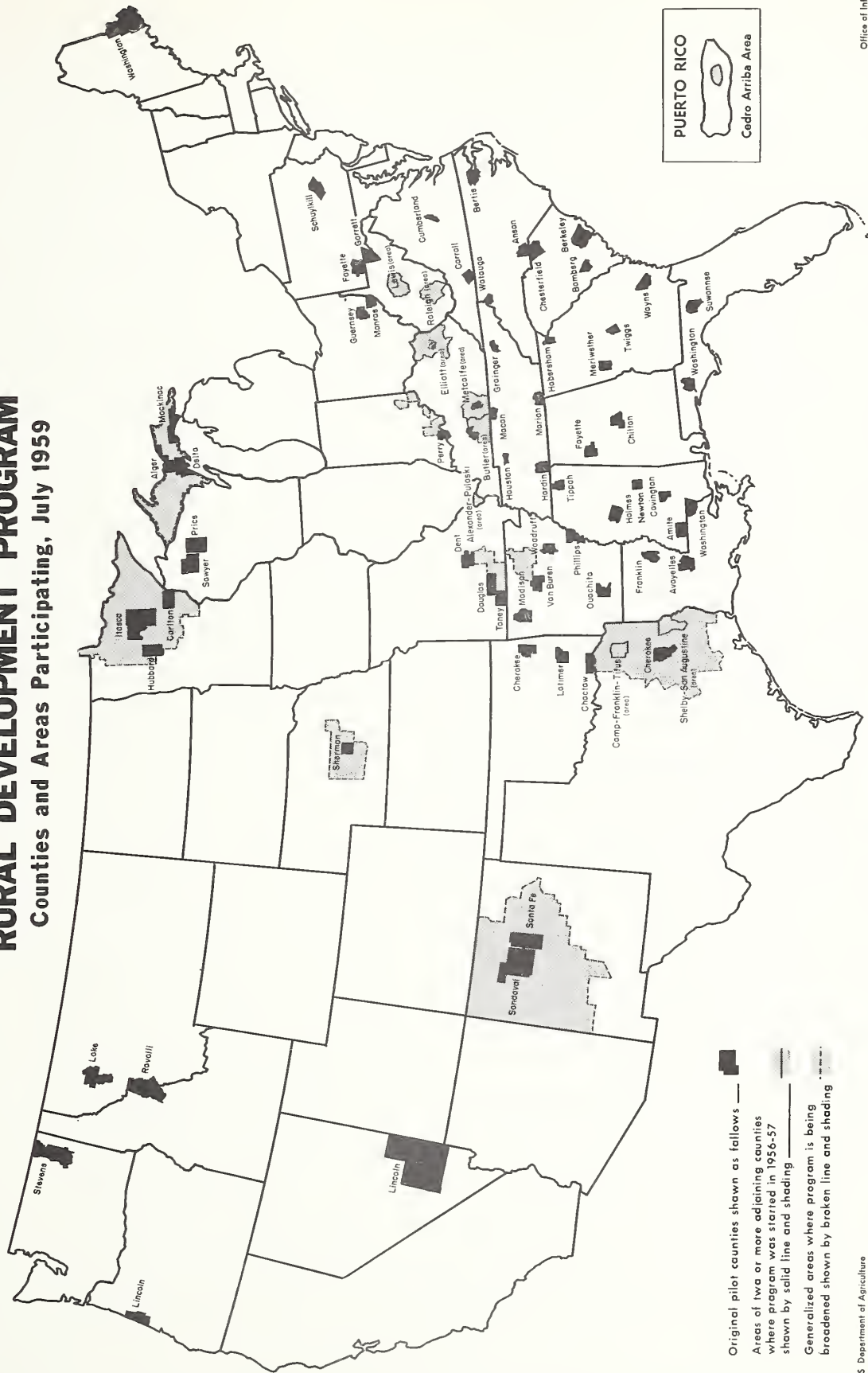
About 40 farms in Hubbard County received intensive help with the result that 11 of them boosted their total sales by \$1,100 per farm.

In response to an inquiry by a lath manufacturer, Minnesota extension foresters suggested the use of aspen and sent samples, together with information regarding strength, fiber and adaptability. As a result, a new lath mill using aspen was established in a low-income area, employing eight men. This improved the forest market and income of small farm woodland owners and increased the manufacturer's business from \$70,000 to \$100,000 per year.

In a low-income area of South Carolina, the Extension agent found that local landowners needed assistance in planting trees and meeting requirements under the Conservation Reserve Program. The agent suggested to the farmers that they organize a crew to provide these services and advised them in the selection of equipment, seedlings, and in planting techniques. The result

RURAL DEVELOPMENT PROGRAM

Counties and Areas Participating, July 1959



was the employment of 23 people during a season when farm work is at its lowest ebb, as well as providing needed services. In addition, after the tree-planting season was over, they began a logging operation which continued until farm duties could be resumed.

One timber yard in Alabama has been renovated and now employs five workers the year round, and 80 part-time jobs have been found in the surrounding forest which supplies this new timber market.

During an 18-month period, 40 Illinois farmers developed basic farm plans covering 2,700 acres. A pilot area succeeded in obtaining a contract for its cucumber production from a Chicago firm.

The Rural Development Committee in Madison County, Arkansas, decided that its first priority goal would be to strengthen the county's dairy program. The county imported high quality Holstein heifer calves from Wisconsin and distributed them among the interested farmers. The local bank cooperated under the program by lending money at a reduced interest rate to farmers buying the heifers. A graduate veterinarian was persuaded to settle in the county, which previously had no veterinarian. Real growth for this enterprising county is predicted within the next few years as a result of this effort.

In Mississippi, 200 families increased their cash income by selling milk for the first time.

In Watauga County, North Carolina, one of the rural development counties, over 1,000 farmers watched a demonstration in applying fertilizer on a steep mountainside pasture with an airplane. In 17 western North Carolina counties there are about one-half million acres of steep, unimproved pastureland. The farmers of the area have already improved 155,000 acres by sledding fertilizer material up the slope and spreading it by hand. These operations have necessarily been limited to the more accessible slopes, due to labor costs and the sheer drudgery of the job. Enlisting the support of several interested groups, the county agents presented a highly successful demonstration of spreading fertilizer by plane. Although expensive, it was not as expensive as hand labor on these slopes. As a result of the demonstration, many farmers have become interested in the new technique.

In Bertie County, North Carolina, one of the pilot counties, farmers and businessmen financed an up-to-date farm produce market, which last season handled \$150,000 worth of sweetpotatoes and watermelons.

A National Rural Development Workshop was held at Jackson's Mill, West Virginia, May 11-15. About 200 people, representing over 30 States and six Federal departments and agencies, took part in this workshop. The purpose was to "train the trainer," or teach ways to carry out the Rural Development Program. Some of the main topics discussed were the function of the Rural Development Program, economic development within agriculture, and economic development outside agriculture.

- C. Program Building (Program Projection): In 1958 approximately 1,200 county extension staffs worked with groups of local citizens to analyze the problems and potentials in each of these counties and to develop long-time programs of action. The number of individuals directly involved varied from 30 on an individual county committee to approximately 300. Membership included farm men and women, representatives of farm organizations and commodity groups, local governments, business organizations, and civic groups.

These committees, working with the local extension staffs, analyzed the nature and extent of local resources and their current use, analyzed opportunities for sound adjustments, outlined adjustments in extension programs to provide the educational leadership and assistance needed to deal with top priority problems and opportunities, and suggested activities by others where appropriate.

While this effort is a valuable educational experience itself for those directly involved, the major objective is to insure that extension staffs locally have the best guidance possible as to the best use of their time and resources through their educational programs in line with major local problems locally determined.

- D. Producers Assisted by Extension in Applying Results of Research and Advancing Technology: The U.S. Department of Agriculture has a deep interest in an effective extension program to get research results interpreted and woven into an educational program to assure a continuing healthy agriculture to provide adequate food and fiber at reasonable cost. Some of the programs benefiting from Extension's educational programs follow:

1. Meat-Type Hogs: Surplus lard and consumer resistance to fat meat presents a serious problem in the swine industry. Extension educational effort has been directed to training producers to recognize and select meat-type hogs which produce leaner pork, are more prolific and more efficient converters of feed, and to working with marketing agencies in establishing grading services and the purchase of hogs on a merit basis. As a result of intensified educational efforts, the percent

of meat-type hogs marketed in many areas has now risen from 15-18% to 30-35%. An indication of the transformation that is taking place is the trend of average carcass data collected on the top 60 hogs exhibited in the Indiana State Barrow Show over the past nine years. Compared with 1950, the 1959 average showed an increase of 2.2% in yield, 4.8% in percentage of the four lean cuts, and a decrease of 5.4% in fat trim, 1/3 inch of back fat and 20 pounds in live weight.

The Cooperative Extension Service is working with swine breeders in establishing swine evaluation stations for the purpose of locating breeding boars that are able to transmit qualities of lean-meaty carcasses and feed efficiency to their offspring. In 1958, 36 swine testing stations were in operation, with an annual capacity of 7,854 head. The impact of this program on improvement in average quality of pork produced is already evident.

Results of educational efforts directed toward a more even distribution of farrowing dates throughout the year is strikingly shown by the following quarterly figures computed from the USDA Pig Crop Reports:

Percentage Distribution of U. S. Farrowing

Period	June-Aug.	Sept.-Nov.	Dec.-Feb.	Mar.-May	Total
1947-56 (av.)	18.9	19.9	14.0	47.2	100.0
1958	23.5	20.7	20.7	35.1	100.0

Continued progress in this direction should narrow seasonal hog price fluctuations and also help to check extreme price declines during years of heavy production.

2. Beef Cattle Improvement: Beef cattle performance testing programs have been a major extension educational activity for several years. As a result, the principle of selecting breeding stock on the basis of individual efficiency in grain and feed utilization, reproductive ability and superior carcass qualities, is gaining widespread acceptance by cattlemen. In 42 States, 3,020 beef cattle producers are now cooperating with their Extension Service in performance testing demonstrations involving 193,820 brood cows. Extension workers have assisted cattlemen in 11 States to organize State beef cattle improvement associations.
3. Expanding the Brucellosis Educational Program Important to Farmers: Extension workers continued their educational programs urging participation in the official vaccination program which established a new record in 1958 with nearly 6.5 million calves being vaccinated. Herd infection rates continued to decline, decreasing from 9.8% to 8.8%.

During 1958, 495 counties were declared modified certified as compared with 337 in 1957. It is estimated that 90% of the States will be modified certified by 1960.

4. New Corn Planting System Saves 1,400 Farmers about \$198,000:
An Extension-recommended practice saved Minnesota farmers in 1959 some \$198,000 in equipment costs, made corn planting easier, and was good for the soil. This practice is wheel-track planting--one form of the new "minimum tillage" concept in farming. It means planting corn in tractor tracks directly on freshly-plowed soil. The farmer doesn't disk the field, nor does he "drag" it just before or after planting, as done under the old method. Eliminating these field operations saves about \$5 per acre. A recent survey showed that farmers in Minnesota planted about 39,700 acres of this 1959 crop this way, saving a total of around \$198,000. An even more important feature of wheel-track planting is protection of soil structure. Less tillage means less soil compaction, and less compaction results in better water absorption capacity, less run-off, and better soil structure in general.
5. Cotton Growers Shown How to Figure Out Their Best Choice:
The Agricultural Act of 1958 offered choices A and B to be made by individuals as cotton growers, regarding their 1959 cotton crops. The Extension Services of the leading cotton States made special efforts to demonstrate to the cotton grower how he could figure out which choice was more advantageous to him as an individual. Forms specially designed for the purpose were distributed. Also disseminated were lists of factors and farm characteristics affecting the advantages of each choice.

Nearly all cotton growers were reached, directly and indirectly, by this Extension effort, and indications are it was helpful to them in reaching decisions that were financially important.

6. Latest Cotton Research Findings Disseminated by Extension is resulting in outstanding improvements in harvesting and ginning, as indicated in the following data:

Harvesting: Training schools, held under the joint leadership of the Extension Services and the manufacturers of mechanical harvesters, helped more than half the Nation's 24,000 mechanical cotton picker operators to learn proper machine operations in order to secure higher quality and greater income. More than half of the 26,000 owners of mechanical cotton strippers received information and

assistance in defoliation, weed control and stripper operation, which helped them improve cotton quality during the same period at extension meetings. It is conservatively estimated that half of the mechanically harvested cotton in 1958 was improved a minimum of \$5 per bale in comparison with cotton similarly harvested in the years 1954 and 1955, indicating an increased return of approximately \$9,500,000 to the Nation's cotton producers. This extension educational effort was enthusiastically supported by all cotton groups from producers to spinners.

Ginning: Extension-sponsored instructional meetings and training schools for gin owners and operators have been attended by more than 5,000 gin operators since 1954. The U. S. in 1958 had approximately 6,000 cotton gins. The training has resulted in more producer income, a better product for the spinner and more efficient operation by the ginner. The reduction in gin damage from rough preparation (poor ginning) alone has resulted in a saving to producers for each of the five years of at least \$10 per bale on 6% of the crop. It is estimated that on the 1958 crop, this reduction in rough preparation alone added more than \$6,000,000 to producers' income.

Extension efforts in 1959 and future years are being directed toward a reduction in fiber damage due to overdrying and the use of excessive cleaning machinery in cotton gins.

7. Extension Aids Farmers in Selecting Forage Crops of Disease-Resistant Varieties: To shorten the lag between the release and widespread use of new varieties of forage crops, and to insure farmers of adequate seed of both old and new varieties recommended by Extension Service, the Federal Extension Service conducted a varietal trend study in each of the 48 States in 1958. It provided a breakdown by varieties on 103 million acres planted to 16 forage crops, the varieties recommended by each of the States, and the expected trend of each variety.

The development of more and better forage crop varieties and the significant trend toward the concentration of forage seed production in certain regions for use outside the area of production emphasized the need for interregional communication as a guide to production and distribution. To answer this need, a report of the study was made available to extension and research personnel, and to seed producers and distributors to serve better the needs of farmers throughout the United States. Typical examples of this work follow:

Michigan: Introduction of a mosaic resistant cucumber variety increased yields from 30-125 bushels per acre

during the period of 1950-1957. More widespread adoption of this variety the past year has further enhanced production efficiencies through increased yields and a consequent reduction of per unit costs.

Louisiana: Extension horticultural specialists in Louisiana recognized internal cork of sweet potatoes as the major pest and a threat to the \$20 million industry within the State. In a survey of growers, it was found that infection from this disease ranged from one and one-half to 100% with an average infection of 45%. An intensive educational program on control measures for internal cork was carried out in cooperation with seedsmen, shippers, producers, processors, pesticide dealers, and research personnel reducing the incidence of this disease from an average infection of 45% to 6% in the course of two years.

Texas: Demonstrations to control pecan nut casebearers by spraying were conducted in San Saba and Gonzales Counties. Despite extremely adverse weather during the spray period, an average of 99% control was obtained in demonstration orchards in San Saba County.

Oregon: The use of chlorine in wash water on pears for control of fire blight organism is estimated to have saved growers \$10,000 the past year.

8. Residual Chemicals Recognized as Health Hazard: Residual chemicals on food products for human consumption were early recognized as a major health hazard by specialists concerned with crop and animal production. To help overcome and minimize this hazard, extension pathologists and entomologists have taken the lead in advising and keeping producers, dealers, processors, etc. informed of residue tolerances under the Pure Food and Drug Act. This action on the part of Federal, State and county extension workers has materially reduced health hazards and losses where chemical pesticides are used in the production of food, forage and fiber crops.
9. Extension's Pest Control Programs Reduce Losses to Farmers: California tomato growers saved \$30 per acre by withholding applications of insecticides under an Extension Supervised Insect Control Program. Extension entomology is relatively young in California, and growers were accustomed to following the recommendations of fieldmen of insecticide companies. They were applying from five to seven applications of insecticides for tomato fruitworm control. Experiments showed that these were not necessary. Supervised

control demonstrations during 1957 and 1958 bore out the results of experiments. Tomato fields are examined regularly for presence of tomato fruitworms in the supervised control program, and insecticides are applied only when necessary. In 1958, Ventura County farmers saved \$60,000 by not treating 2,000 acres. Demonstrators in Orange County had a similar experience. Had the farmers in both counties participated in the Supervised Control Program, they would have saved \$332,500.

Arkansas pioneered in the Cotton Insect Scouting Program: It netted participating farmers \$69.25 per acre in 1958. Extension held 427 scouting schools and 6,474 farmers received further assistance in scouting for cotton insects. Farmers paid Extension-trained scouts \$75,000 in salary and \$10,000,000 for cotton dust alone, but realized profits to the extent of \$90,025,000. Around 65% of the States' cotton was treated according to Extension's recommendations. Wise use of insecticides saved farmers money already spent for seed, fertilizers, and other practices. These measures raised the per acre yield of lint cotton from 249 to 452 pounds per acre.

Extension's job is not complete. For example, Louisiana reports an annual loss of \$10,000,000 to stored-grain insects and \$7,500,000 to rats. South Carolina reports an annual loss of \$75,000,000 to insects and plant diseases. The Department of Agriculture reports on a nationwide basis a \$4 billion annual insect loss figure.

10. Need for Water Conservation Growing More Acute: Extension irrigation specialists are making a valuable contribution to the conservation of the Nation's water resources. Our national water supplies are limited. In 1958 over 1,000 cities had to curtail water use. Recent forecasts indicate that our national water requirements will double by 1975. At the present time irrigation accounts for nearly one-half of the total water use in the United States. The present rate of irrigation expansion would definitely double agriculture's requirement by that time. Extension specialists are continuing to place increased emphasis on more efficient and wiser use of present water supplies, the development of new supplies--surface and ground water and the use of municipal and industrial wastes for agriculture. These objectives require closer cooperation with municipalities, industry, fish and game commissions.

- E. Extension's Marketing Programs Contribute to Consumer Welfare and to Effectiveness of Marketing Agricultural Products: Inefficient and improper practices in marketing can ruin the finest job of producing food products. Everyone is affected--producers, trade groups, and consumers. The price is largely determined by the methods of handling. Waste and spoilage also affect price since a substantial percentage of perishable fruits and vegetables are lost before reaching markets or consumers. For instance, in Georgia alone, consumers in 1956 paid over 2 1/2 billion dollars for Georgia farm products for which producers received \$684 million. The marketing costs which include handling, distribution, transportation, processing, etc., were \$2 billion. Marketing costs are higher today than at any time since 1940. Georgia producers now receive less than 30 cents of the consumers' food dollar. Throughout the Nation there is need for marketing educational programs to inform all groups of the latest marketing, distribution, and utilization methods so that products can move from farms through trade channels to consumers with the minimum of waste and lowest practicable cost.

The consumer marketing personnel worked closely with marketing organizations and producer groups in identifying marketing problems and areas where a greater consumer knowledge is needed. Large segments of consumers are reached by the use of mass media outlets. At the present time there are consumer marketing programs in 40 States and Puerto Rico. There also is a constant interchange of information and problems in all of the States in which there are programs. In this manner, personnel became acquainted with the marketing problems of other States as well as their own. Examples of the variety of educational marketing programs developed to further the movement of agricultural products follow:

Eggs: Hawaii has long faced a problem concerning the quality of Island eggs. Retail stores in Hawaii have, at intervals, considered the refrigeration of Island eggs, but refrigeration was not thought feasible because of the lack of consumer understanding and the consequent feeling that refrigeration meant poor egg quality. The consumer marketing specialist took the leadership in working with retail stores in discussing egg refrigeration in the store and the consumer need for an understanding of the desirability of such refrigeration. Thus, in conjunction with the installation of refrigeration units for eggs in some supermarkets, educational materials were developed for homemaker use which were disseminated through the stores, via mass media channels, through county extension personnel, and through consumer meetings. A substantial increase in the proportion of Island eggs being refrigerated in the store has been noted. There has been some increase in the number of supermarkets having refrigeration units for eggs, and indications are that consumers are readily accepting this improved product.

Potatoes: Early in the 1958 shipping season the railroads in northern Maine announced a reduced freight rate on potatoes when they were loaded in cars of 50,000 pound minimum load. The marketing specialist, in cooperation with representatives from the Bangor and Aroostook Railroad and the American Association of Railroads, developed a loading system whereby five and ten pound paper bags of potatoes could be loaded easily into all rail cars. Through meetings, special movie films, and television programs this new loading procedure was explained to farmers loading cars, and was widely adopted. Rail shipments following the introduction of this loading procedure averaged 490 cwts. per car. Previously the average rail shipments weighed approximately 420 cwts. The use made of the new minimum loading weight resulted in an approximate saving of 7¢ per hundred and of a million dollars in marketing the balance of the 1957 crop.

- F. Extension Working to Prevent Fatal Farm Accidents: Farm people suffered 7,500 fewer deaths from accidents in 1957 than in 1947, and the rate of accidental deaths was reduced from 66 per 100,000 in 1947 to 57 in 1957. Nonfatal injuries have been reduced correspondingly, but still injure about one million farm people annually. The Department of Agriculture and the National Safety Council jointly sponsor the National Farm Safety Week, and Federal and State extension workers participate in this as well as conduct year-round extension activities for accident and fire prevention. In 1958 more than 97,000 voluntary leaders in 2,874 counties participated in farm safety extension work, assisting nearly 3 million farm families to follow recommended safety practices. About 1 million boys and girls received definite training in farm, home, recreation and highway safety as 4-H Club members.
- G. Cooperative Farm Building Plan Exchange: The Cooperative Farm Building Plan Exchange is one method Extension used to reach the 371,150 farmers assisted with adopting recommended practices in farm buildings during 1958. It also aided the 1,882,800 different families and homemakers who were assisted in adopting recommended practices in the house and its surroundings.
- H. Educational Programs for Indian Families: The period of transition from the Bureau of Indian Affairs Extension work to Federal-State Extension Services is fairly well established in most areas. Emphasis for the past two years has been toward understanding program operational procedures and the scope of assistance needed by and available to Indian families. This is shifting to providing help in specific subject-matter areas and the assumption of responsibility by Indians for program planning and follow-through.

- I. More than 7,475,000 Families Assisted by Home Demonstration Workers: This is an increase of about 30% over 1954 and 8.8% over 1957. In 1958, home economics extension workers encouraged these families to use knowledge and skills drawn from many sources in solving the many complex problems affecting their needs. During 1958, homemakers were assisted by educational programs directed toward (1) managing total family living resources of time, money, energy, and abilities to provide optimum satisfaction for all members of the family; (2) consideration of practical alternatives in solving problems of daily living within the home and in making longer time decisions for the family in such areas as child development and human relationships, nutrition and health, clothing, family economics, housing, equipment, and furnishings; (3) achieving skill in working cooperatively with others to identify and get understanding of community problems and public affairs which affect family living, and to obtain the needed improvements in services and facilities; (4) enhancing, through these and related experiences, personal development and growth of leadership.

Today's Homemaker Confronted with Many Problems in Feeding Her Family: Farm families are producing and storing less food at home. For example, studies in North Carolina showed farm families spending about 27% of their income for food, even though most of the food purchased could be produced on the farm at less cost. As incomes dropped, a home food supply program assisted them in maintaining nutritional standards and reducing living costs. "Rise a Square Meal Around Home" became a slogan with all agricultural agencies in the State lending support. Approximately 97,000 families improved their food supply through participation in this program. In Edgecombe County, home demonstration club members alone valued their savings from gardening at \$55,000, an average of \$110 per family. In addition to the money saved, diets were substantially improved through the use of more vegetables, fruits, dairy and poultry products.

In New Jersey, parents requested assistance with the food problems of young children. Material was prepared stressing the importance of food which meets individual needs along with the what, how much, how often, and why of food for the preschool child. Mothers learned how to adapt family menus to suit a child's needs.

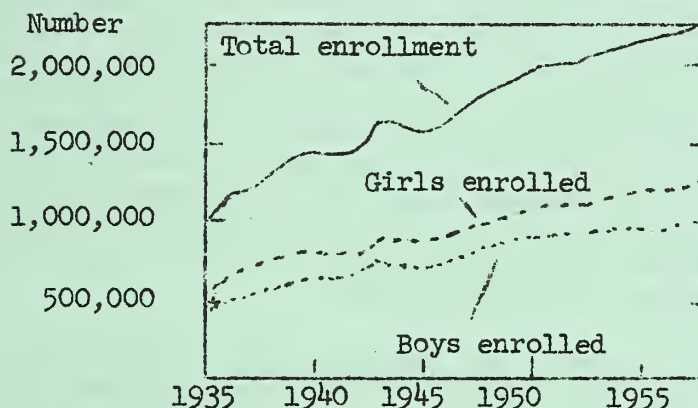
In Rio Grande County, Colorado, a survey showed that county folk were not getting enough vitamins A and C, nor calcium, with breakfast being the most neglected meal. A county-wide Better Breakfast campaign was conducted by the home demonstration club, enlisting the aid of other groups, and through

personal contact and mass media. For each of the three months the campaign concentrated on a different food group-- proteins, grain foods, and fruits. About 30,000 people were reached with the information, and three other States requested the information. This campaign will continue to pay dividends in better health for years to come.

- J. 4-H Club Work and Work with Young Men and Women: The primary aim of 4-H Club work and other extension work with youth is to provide opportunities through organized 4-H Clubs and project work for learning not only the science of agriculture and homemaking but also to promote mental, physical, social, and spiritual growth. Informal education offered by the Cooperative Extension Service uniquely supplements the training received in the home, church, school, and other youth-serving agencies.

In 1958 the 4-H Club enrollment increased over 50,000 to a total of about 2,254,000.

EXHIBIT C



4-H CLUB ENROLLMENT

A total of about 760,000 boys and girls were enrolled for the first time, making a total of 20,566,651 different boys and girls who participated in club work at any time.

The percentage of boys and girls who completed their club work was 79.5. The average length of time they remained in club work was 2.7 years, and their average age was 12.4 years. There are over 92,000 local 4-H Clubs. Responding to the needs of American youth are about 300,000 4-H Club Leaders. A current analysis of the country's youth population shows a decrease in the number of farm youth, which is to be expected, since there is also a decrease in the number of farms and farm families. These trends have had an impact on the nature of 4-H Club work. The tremendous growth of such projects as entomology and electricity reflects the current interest in the scientific method. The increased participation from non-farm homes is responsible for the growth of new projects, such as automotive care and safety. The program known as "career exploration" has gained much momentum due to the concern of young people about their lifetime job possibilities.

The Federal Extension Service and State Extension leaders are exploring new ways and methods of expanding the understanding and appreciation of science through the 4-H Club programs. Currently there is taking place a pronounced upgrading of the substantive content of these programs. The recent national conference held in cooperation with the National Science Foundation evidenced this trend as 27 of the nation's leading scientists and Extension leaders met to discuss the development of such programs. Specific examples of this greater depth of 4-H programs are the TV Science Series of Michigan, the gibberellic acid work with plants in Massachusetts, and the climatology project in Iowa. Increased 4-H work in economics is under way in Florida, and a cooperative project in marketing and career exploration is under way in Pennsylvania.

Training Youth for Modern Farming: In 1955, \$1 out of every \$5 spent by farmers for their expenses went for purchase, operation and maintenance of motor vehicles and farm machinery. In order that this money be spent wisely, extension workers are teaching farm youth through such 4-H Club projects as Tractor Maintenance, Automotive Care and Safety, Farm Shop, Electrification, and other engineering projects. Those enrolled have increased from 27,000 in 1945 to over 300,000 in 1958.

As a result of 4-H Club projects, many father-son partnerships have become realities. In San Joaquin County, California, a club member's interest and initiative led to a business agreement with his father to lease land for commercial crop projects. When his father expanded his acreage of sugar beets,

the boy had an opportunity to begin a sugar beet project. Since the boy's acreage allotment had been approved by the local Agricultural Stabilization and Conservation Committee, he negotiated a grower contract to market his crop with a sugar beet company. His careful work on the project resulted in an "honor roll" above average yield recognition from the processor. As a result, 30 other club members are now acquiring similar experience. About 4,700,000 projects are currently carried by 4-H boys and girls. Many of these are production projects for profit, such as the case of a Jefferson County, Arkansas boy who grossed \$2,000 with about \$1,100 net income from four acres of cotton and eight acres of soybeans for his 1957 projects. His yields were just over 1 1/2 bales of cotton per acre and 54 bushels of beans per acre. These are at least double the State average yields.

A 4-H Club girl of Emden, Missouri, sums up her experiences in 4-H by stating that her 4-H projects in home economics have raised the family's nutritional standard of living, added new ideas in textiles, clothing, and home furnishings, and have brought new understanding to family relationships. Another girl added 1,250 pounds of food, canned, frozen or stored, to her family's larder.

Conservation is the goal of some 4-H projects, and generations ahead may reap the benefit. At least half a million fast-growing pine seedlings were planted in Jefferson Davis County, Mississippi, this year as a result of 4-H Club work. The seedlings were planted by 4-H Club boys enrolled in the project. Following their example, adult farmers stepped up their planting program. Now idle land and eroded hillsides, gullied by years of row-cropping, are growing trees.

- K. Insuring Sound Extension Programs Through Training and Research: There is a saying, "He who dares to teach should never cease to learn." The eagerness of extension workers to be prepared to meet the constantly rising standards for professional proficiency is proved again and again by their constant efforts to keep fully informed of the best teaching methods and latest subject-matter research findings.

Training: Training of extension workers continues to receive priority by State extension directors. At their request, administrative committees in most States are developing policies and procedures for inservice training. Improved techniques for determining training needs and for coordinating planning have been developed. Michigan and Kansas are experimenting with intensive induction training programs for new workers.

During 1958, the number of extension personnel on graduate study leave increased by 60% as compared to 1956, and during the same period the number of extension personnel taking graduate credit courses while on the job increased 48%. In 1958, approximately 30% of the total extension staff was given inservice training at short-time schools or conferences. Much of this training was centered on communications for which teams had been trained in communication workshops the previous year.

Research Sharpens Extension's Effectiveness: The Federal Extension Service conducts extension type research and provides leadership to constantly improve the effectiveness of extension methods and to insure that nationwide programs are geared to meet the needs and interests of the farmer and homemaker. For example, four studies of the effectiveness of extension marketing information for consumer programs show that well planned and executed programs using mass media channels such as TV, radio, and newspapers can (1) attract large audiences; (2) influence adequate numbers to justify resources allocated; and (3) gain acceptance for free time or space by commercial media. The studies resulted in increased appreciation of the potential of this type of program and better understanding of the audience to be reached. Findings of the studies were used (1) for administrative decisions about allocation of personnel and funds; (2) for reporting results of programs; (3) as the basis for adjustments in programs; and (4) in developing and improving programs in other States.

- L. Extension Workers Employ Latest Mass Communication Techniques to Reach More People: The Extension Service information programs are kept flexible and aware of the trends in audience composition. The Service's first responsibility continued to be the farm family. However, other groups are receiving appropriate attention. Extension use of specialized communication for specific audiences is increasing to include greatly expanding suburban families, the large increase in part-time farmers, and the rapidly increasing urban audience. Agriculture itself is rapidly dividing into two groups--large, highly commercial, specialized operation, and smaller, family-type general farming. The needs of the two groups differ greatly, and extension teaching methods and means of communication for reaching the two must be adjusted to their needs, interests, and social patterns. More use is being made of specialized communications for specific audiences. There has been a big growth in the number

and size of suburban weeklies and dailies. Extension can furnish the information they need, of interest to homeowners and gardeners, and reach a large audience through this medium. The changing audience of traditional rural weeklies is affecting their editorial content and use of agricultural subject matter. There is greater awareness on the part of the extension workers of the need to use mass media.

During the last two years, three-fourths of the total cooperative extension staff has participated in communication training programs. Extension information specialists are spending 10% of their time in the training of other workers in the use of more efficient and effective communication techniques--mass, printed, and visual. As a result, agents are using TV, taped telephone messages that work while the agent is out, direct mail circular letters and to-the-point leaflets for specialized groups, as well as increasing co-operation with industry and labor groups in distributing needed information through their channels.

West Virginia has replaced a series of 26 annual garden schools with a series of one-hour TV programs, and greatly lowered costs and increased the number of people served. North Dakota has replaced annual Farm and Home Week with a series of programs giving similar material over five TV stations with an audience of 120,000 people. Michigan has developed a 4-H Television Club series of programs that had 5,500 non-farm boys and girls carrying out a 4-H electric project.

A Pennsylvania home agent has been using radio to reach two-thirds of the women working in factories with homemaking information they wanted. West Virginia has found radio a very good channel for getting gardening and farm information to part-time workers en route to and from their factory and mining jobs. A Missouri county agent, through press and other channels and limited effort per person reached, arranged a farm tour in which 6,000 city boys and girls and 1,000 parents participated. Illinois and other States have greatly increased the number of people attending annual Farm and Home Week at the college through more effective exhibits.

As reflected in the following Exhibits D and E, extension agents during the year distributed 32 million

leaflets and bulletins, prepared 288,000 radio programs, and 19,000 TV programs. They also provided editors with 781,000 educational news releases.

EXHIBIT D

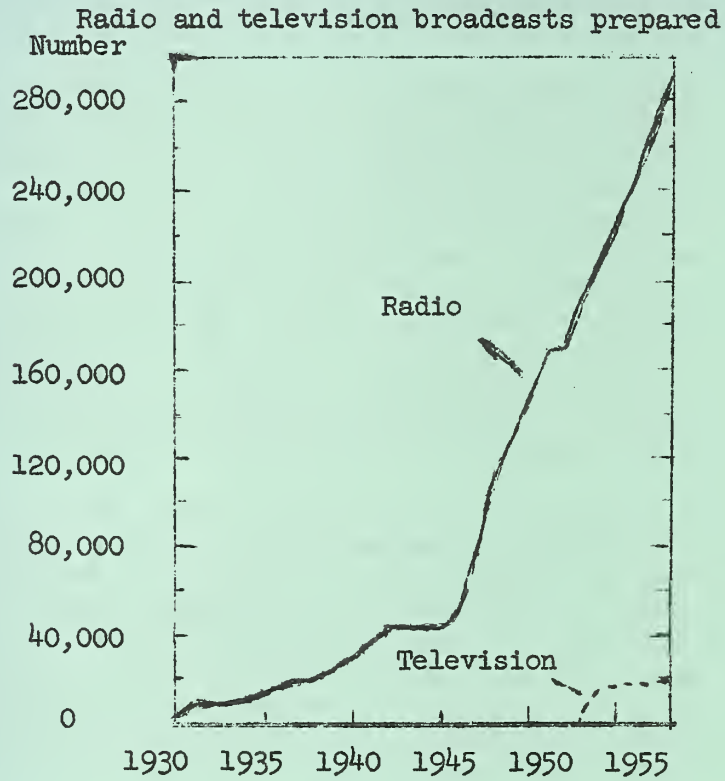
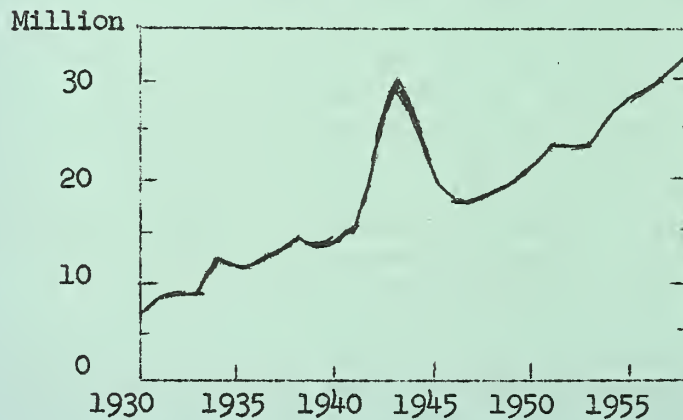


EXHIBIT E

Bulletins distributed



- M. Assisting State Extension Services with Management Problems: The second in a series of management training conferences was conducted by the Federal Extension Service Administrative and Management Operations staff at Atlanta during the year. This conference was attended by the Southern States representatives. These conferences are the result of a request by the States that one such meeting be held annually.

As the result of a pilot demonstration in one State relating to more efficient installation of State and county office records and filing systems, other States requested assistance with the same problems. The program to develop and install these uniform filing systems has been accelerated. Seventeen States, containing 1,080 counties, have established such simplified record systems, resulting in a general improvement in office management.

The Federal Extension Service, recognizing that an Administrative Handbook would be a valuable tool for effective management, developed one for distribution, and develops additional chapters to keep the Handbook up to date. This year three sections were added: (1) Cooperative Extension Funds, (2) Cooperative Extension Personnel, and (3) Penalty Mail.

During the year the Federal Extension Service continued its fiscal examination and management assistance work with the States and Puerto Rico. Assistance was provided in solving management problems in response to State requests.

STATEMENT OF OBLIGATIONS UNDER ALLOTMENTS AND OTHER FUNDS

(Includes only those amounts which, by November 30, 1959, were actually received or programmed for 1960 or 1961. Since work for other agencies is performed on a service basis, at the request of those agencies and for their benefit, it is not practicable to estimate in advance the amounts to be received in most cases.)

Item	: Obligations, : 1959	: Estimated : Obligations, : 1960	: Estimated : Obligations, : 1961
Allocations and Working Funds (Advances from other agencies):			
Commodity Stabilization Service - For technical assistance to Agricultural Stabilization and Conservation Committees in Alaska:			
Administrative Expenses, Section 392, Agricultural Adjustment Act of 1938	\$800:	\$800:	\$800
Local Administration, Section 388, Agricultural Adjustment Act of 1938	12,492:	13,910:	13,910
Total, Commodity Stabilization Service	13,292:	14,710:	14,710
International Cooperation Administration - For training and technical assistance activities	103,298:	150,578:	- -
Total, Allocations and working funds	116,590:	165,288:	14,710
Trust Funds:			
Miscellaneous Contributed Funds:			
For cooperative work with land-grant colleges on in-service training activities through summer-session courses for extension workers	6,672:	6,859:	6,700
Obligations under Reimbursements from Governmental and Other Sources:			
Federal Extension Service - For miscellaneous services to other accounts	41,362:	34,290:	37,860
TOTAL, OBLIGATIONS UNDER ALLOTMENTS AND OTHER FUNDS	164,624:	206,437:	59,270

FARMER COOPERATIVE SERVICE

Purpose Statement

The Farmer Cooperative Service was established following the enactment of the Farm Credit Act of 1953 (Public Law 202, August 6, 1953), which transferred the research and technical assistance work for farmers' marketing, purchasing and service cooperatives, under the Cooperative Marketing Act of 1926 from the Farm Credit Administration to the Secretary of Agriculture.

The Service conducts research, advisory, and educational work with cooperatives on problems of organization, financing, management policies, merchandising, costs, efficiency, and membership to help farmers who are members of such organizations improve the operations of their businesses. It cooperates with the Extension Service, Land-Grant Colleges, Banks for Cooperatives, State Departments of Agriculture, and other agencies to bring about better understanding and application of sound cooperative principles and practices. It also advises other Federal agencies on problems relating to agricultural cooperatives.

The Service carries on its work through three program divisions - Marketing, Purchasing, and Management Services. On November 30, 1959 the Service had 110 employees, 109 of whom were full-time and 1 part-time, all stationed in Washington, D. C.

	<u>Appropriated, 1960</u>	<u>Budget Estimate, 1961</u>
Appropriation	\$615,800	\$644,650

Salaries and Expenses

Appropriation Act, 1960 and base for 1961	\$615,800
Budget Estimate, 1961	644,650
Increase	<u>+28,850</u>

SUMMARY OF INCREASES, 1961

To strengthen research and technical assistance for farmer cooperatives	+25,150
For employee health benefit costs pursuant to Public Law 86-382	+3,700

PROJECT STATEMENT

Project	1959	1960 :(estimated):	Increase		1961 :(estimated)
			Health Bene- fit Costs :(P.L. 86-382):	Other	
1. Research and technical assistance for farmer cooperatives <u>a/</u>	\$614,427	\$615,800	+\$3,700	+\$25,150(1)	\$644,650
Unobligated balance	3,473	- -	- -	- -	- -
Total employee health benefit costs (P.L. 86-382)	[- -]	[- -]	[+3,705]	[+150]	[+3,855]
Total available or estimate	617,900 b/	615,800	+3,700(2)	+25,150	644,650
Transferred from "Conser- vation reserve program, Commodity Stabilization Service"	-39,900				
Total appropriation or estimate	578,000				

a/ Represents obligations. Applied costs for 1959 are \$613,829. The difference of \$598 reflects, primarily, the excess of printing and reproduction orders placed in 1959 over those received in that year.

b/ Includes \$2,574 obligated in 1958 under the advance procurement authorization (P.L. 85-386).

INCREASES

(1) The increase of \$25,150 is proposed to carry on research and educational work to strengthen the organization and operation of growers' bargaining cooperatives.

Need for Increase. In recent years farmers have greatly expanded their use of bargaining cooperative associations, especially for fruits and vegetables and dairy products, to improve their income through stronger bargaining power. This development springs from greater use of contracts in agricultural production and distribution and from growth of mass markets and size of firms with whom farmers must do business. Bargaining associations have become an

important means throughout the country for representing growers in negotiating with processors, distributors and retailers for price and other terms of sale. The many complex problems confronting growers in forming and operating these associations call for research on their methods of organization, membership and management programs and operating procedures and methods.

Farmer groups who are considering organization of a bargaining association, as well as bargaining cooperatives, urgently need this research, for little information is available to help farmers form and operate such associations. At the present time, apple producers in the principal states producing apples for processing are working to develop coordinated bargaining cooperatives. Yet there is little available information to help them on their specific problems. Similarly, potato producers in several states who are considering the formation of bargaining cooperatives lack essential facts on how to build organizations that can negotiate effectively for them. Moreover, it is essential that the requirements for sound bargaining cooperatives be well understood to prevent their formation where there is insufficient economic need or grower interest.

Plan of Work. Selected bargaining cooperatives will be studied to determine operating methods and negotiating techniques applicable to specific types of situations. Problems of gaining recognition from processors, determining kinds of economic information needed for effective bargaining, ascertaining the percentage of the product needed for efficient operation, and developing methods to obtain and maintain member support and ways to improve management will be analyzed. Attention will also be given to determining how the activities of associations performing the functions of bargaining and physical handling of a product in a single market area can be coordinated to provide improved service to farmers.

As information is developed it will be used to help grower groups meet actual problems for improving their bargaining power.

2) An increase of \$3,700 is required to meet health benefit costs under Public Law 86-382, applicable to the base for 1961. A full explanation of the health benefit cost estimates appears in the "Preface" at the beginning of the Explanatory Notes.

STATUS OF PROGRAM

The Farmer Cooperative Service conducts research, educational and advisory work to assist the 3 million farmers who are members of 9,900 marketing and purchasing cooperatives and related business service associations. In 1957 these farmers held a total of 7.7 million memberships in their cooperatives.

The Service gathers, analyzes, publishes and disseminates information about farmer cooperatives to further their sound development. This work is carried on jointly with general farm cooperative organizations, land-grant colleges, Federal and State extension services and State departments of agriculture.

Current Activities: The work of the Farmer Cooperative Service helps farmers strengthen their cooperative enterprises by improving their organization, management and operating methods. Costs of marketing farm products are increasing due to demands for additional processing and other services, better quality and larger quantities required to meet needs of mass buyers. Similarly, costs of farm supplies reflect increased services of handling such supplies which has become necessary to meet the highly technical needs of farmers today. These trends are forcing many farmer cooperatives to search for more efficient organization, management and operating techniques. Problems requiring special emphasis are:

1. New demands on farmer cooperatives. Farmers must deal with large, well-integrated businesses having extensive resources and bargaining power. Experience is demonstrating that further integration by cooperatives is needed if they are to represent their farmer members effectively in dealing with these concerns.

Farmers and their cooperatives are calling on the Farmer Cooperative Service in increasing numbers for help in building stronger organizations in order to achieve greater bargaining power, increased operating efficiency and other advantages of large scale organizations. Farmers receive the direct benefits of efficient farmer cooperatives through increased marketing returns and lower costs of farm supplies and related business services.

2. Emphasis on long-range programs. The Service continues to carry on active long-range research and educational programs to strengthen cooperative organization and management, membership understanding and participation and better public knowledge of sound cooperative principles and practices. The Service provides national, regional and state statistics on trends in growth and character of cooperatives for the use of farmers, research and extension workers and others who have an interest in these farmer-owned organizations.

Selected Examples of Recent Progress: Recent accomplishments under this program are shown below.

1. Management training is essential. Competent management is essential to the continued development and growth of farmer cooperatives. If these organizations are to serve their members by effectively competing with other business enterprises, the management must be experienced and well trained. The Service appraised present training programs to provide information on the extent and nature of formal training being currently received by managers and directors of farmer cooperatives. This study also revealed primary areas in which further training should be made available. It is significant that managements of only 1 out of 4 associations received any formal training in 1957. By emphasizing the importance and need of training, the study is stimulating better and increased management training programs in farmer cooperatives.

2. Benefits of business integration examined. The Service is trying to improve understanding of the economic process of integration by cooperatives and farm leaders. Methods of integrating and essentials for its success were examined in two regional cooperatives -- one in North Carolina and one in Massachusetts -- and in one local cooperative in Michigan. These organizations provide production, financing, purchasing and marketing services for their members. Findings of these studies show that cooperatives are helpful in showing farmers how to control their business operations. Success in integrating cooperatively involves the following essentials: (1) competent and progressive management; (2) interested and informed membership; (3) a sound capital structure; (4) effective credit control; and (5) complete and specialized services.

3. Credit policies important. Six regional studies of credit practices and policies of farmer cooperatives have been made to meet the financing problems of these associations. These are proving useful to managers and directors by providing basic information for operating under a wide variety of conditions. Findings of these studies show that cooperatives can achieve more effective credit control by: (1) establishing realistic credit policies; (2) adopting specific procedures for extending credit; (3) establishing sound collection practices; (4) recognizing and allocating the costs of credit to credit patrons; and (5) encouraging and assisting farmers to use existing credit agencies. These studies showed that cooperatives can hold credit costs to 2 percent of credit sales. The control practices recommended as a result of these studies, if generally adopted by cooperatives, could result in savings of approximately \$1 million annually.

4. Coordination of egg marketing cooperatives is profitable. Integration, contracting and specification buying in the egg industry are becoming widespread. Egg handlers and producers are fewer in number and considerably larger in size. To serve producers adequately and deal effectively with mass buyers, local, unaffiliated egg cooperatives need

to coordinate and centralize their operations. The Service analyzed the problems of merging the operations of egg marketing cooperatives in New England into a regional farm supply cooperative in the area. As a result, six egg cooperatives became the egg marketing division of the cooperative. By diversifying its operations, the regional cooperative now is in excellent position to lower costs, improve merchandising and provide poultrymen with complete production and marketing services.

5. Improved livestock marketing plan developed for western regional cooperative. The present organization structures and operating practices of livestock producers cooperatives need improvement to meet the growth and increased buying strength of packers and mass distributors. The Service has made a study to help a livestock marketing cooperative serving producers in six western states in reorganizing its operating methods. Ways were found to obtain greater member participation and wider director representation in the territory served by the cooperative. The Service also appraised use of contracts between the livestock growers and the cooperative. Further, it reviewed methods of strengthening financial control and meeting increased capital requirements of both the association and individual members. Suggestions were given for an operating plan to improve membership understanding and support, to coordinate operations for efficient livestock handling and selling and to improve lending services to livestock producers.

6. Cooperative grain marketing in the south improved. Cooperative grain marketing has not kept pace with the increased livestock and commercial grain production and off-farm sale of grain in the south. Lack of handling and storage facilities causes depressed prices at harvest time and hampers the normal movement of grain into marketing channels. A study made for a regional cooperative operating in North and South Carolina showed that the major increase in production had occurred in the eastern areas of these states while handling facilities were located to the west. As a result of this study, several additional cooperative facilities were built or acquired.

7. Wool transportation and handling costs reduced. Farmer cooperative wool marketing agencies are faced with rapidly rising transportation, marketing and handling costs because of long distances from producing areas to scouring and manufacturing points. A study made by the Service shows that these associations can substantially reduce transportation and handling costs by (1) operating wool warehousing facilities on a regional basis; (2) utilizing rail carload transit privileges; (3) consolidating shipping points to take advantage of carload and truckload freight rates; (4) bypassing regional warehousing facilities and shipping direct to market from country points; and (5) securing additional transit privileges to include less than carload and carload lots.

8. Economic integration basic to farmer cooperatives. In their efforts to increase members' incomes, farmer cooperatives are confronted by the urgent need for further expansion through economic integration. They have no alternative since other enterprises are integrating further into "contract farming," manufacturing and distribution. In determining possibilities for further integration, cooperative members and managements need more information on the nature and extent of the major services and functions now performed by cooperatives. The Service has already initiated two studies to provide such information. The first deals with the number and kinds of petroleum products manufactured and distributed by farmer cooperatives, and analyzes the major factors contributing to expansion and integration of their petroleum operations. This study reveals that in 1957 cooperatives handled about 1.96 billion gallons of liquid fuels at retail, which represented about 20 percent of farmers' requirements. Ninety-five percent of this volume was handled through cooperative wholesales. In turn 85 percent was produced through cooperatively-owned refineries. The second study of economic integration in farmer cooperatives shows that almost three-fifths of the whole milk sold to plants and dealers in the United States in 1957 was handled by cooperatives either through physical receipts or bargaining transactions. Cooperatives also manufacture almost two-fifths of the creamery butter and three-fourths of the nonfat dry milk produced in the United States.

STATEMENT OF OBLIGATIONS UNDER ALLOTMENTS AND OTHER FUNDS

(Includes only those amounts which, by November 30, 1959, were actually received or programmed for 1960 and 1961. Since work for other agencies is performed on a service basis, at the request of those agencies and for their benefit, it is not practicable to estimate in advance the amounts to be received in most cases.)

Item	Obligations, 1959	Estimated Obligations, 1960	Estimated Obligations, 1961
Allocations and Working Funds (Advances from other agencies):			
<u>International Cooperation Administration:</u>			
For expenses in connection with training and technical assistance activities	\$10,085	\$10,100	- -
<u>Department of Agriculture, Agricultural Marketing Service:</u>			
<u>Marketing Research and Agricultural Estimates:</u>			
For marketing research activities	406,265	407,800	\$415,300
Total, Allocations and Working Funds	416,350	417,900	415,300
Obligations Under Reimbursements from Governmental and Other Sources:			
Salaries and expenses	2,793	- -	- -
TOTAL, OBLIGATIONS UNDER ALLOTMENTS AND OTHER FUNDS	419,143	417,900	415,300



SOIL CONSERVATION SERVICE

Purpose Statement

The Soil Conservation Service was established by the Act of April 27, 1935 (16 U.S.C. 590a-590f). It assists soil conservation districts and other cooperators in bringing about physical adjustments in land use that will conserve soil and water resources, provide for agricultural production on a sustained basis, and reduce damage by floods and sedimentation. The Service also develops and carries out special drainage, irrigation, flood prevention, and watershed protection activities in cooperation with soil conservation districts, watershed groups, and other Federal and State agencies having related responsibilities.

Conservation Operations Program Activities:

The Service provides technical and other assistance to soil conservation districts and other cooperators in the 50 States, Puerto Rico and the Virgin Islands, in helping farmers and ranchers carry out locally-adapted soil and water conservation programs. As of June 30, 1959, farmers and ranchers had organized 2,861 conservation districts. The assistance furnished by the Service includes:

1. Soil surveys to provide physical land facts needed to determine the use capabilities and conservation treatment needs of each acre of farm and ranch land, and the publishing of soil survey reports and maps which are useful also to other Federal and State agencies and the public in the development of special land use programs and for other purposes;
2. Technical help to farmers and ranchers in developing and applying conservation plans which provide for the best possible use by the farmer or rancher of his land, labor, equipment and financial resources;
3. The grant (at no cost to the Service) of some special types of equipment not readily available to the farmer but needed to establish certain conservation practices;
4. Field-scale trials of promising new species and strains of grasses, legumes, trees, shrubs, and other plant materials to determine their suitability for soil and water conservation purposes, and cooperation with State and private organizations to promote adequate commercial production and distribution of plant materials useful for conservation land use and treatment measures. Limited amounts of plant materials needed for this purpose are produced at seventeen plant materials centers;
5. Stream-flow forecasts developed from snow surveys in the Western States to provide for efficient seasonal utilization of available water supplies for irrigation and other purposes.

Watershed Protection Program Activities:

The Service has general responsibility for administration of the Watershed Protection program of the Department, and the formulation and development

of its guiding principles and procedures. The program, conducted under authorities found in the Watershed Protection and Flood Prevention Act, P. L. 566, 83rd Congress, as amended (16 U.S.C. 1001-1008), consists of:

1. Making investigations and surveys of proposed small watershed projects and working with local sponsoring organizations in the preparation of project work plans;
2. Cooperating with States and other local public agencies in the installation of works of improvement designed to reduce erosion, floodwater, and sediment damage, and further the conservation, development, utilization, and disposal of water;
3. Making loans (by the Farmers Home Administration) to local organizations to finance the local share of the costs of carrying out works of improvement; and
4. Cooperating with other Federal, State, and local public agencies in making investigations and surveys of the watersheds of rivers and other waterways for the development of coordinated water resources programs.

In cooperation with soil conservation districts and other local groups and organizations, the Soil Conservation Service provides technical and financial assistance in the planning and installation of water management and erosion control measures such as diversion ditches and dikes, waterflow retarding structures, debris and desilting basins, stream-channel improvements, floodways, gully control structures, roadside stabilization measures, etc. It also provides accelerated technical assistance to farmers and ranchers in these small watersheds in the planning and application of soil and water conservation practices.

The Forest Service participates in the program, generally by cooperating with State foresters, in planning and providing intensified fire protection and certain technical forestry assistance to landowners in applying forest and woodland improvement measures on non-Federal lands and by installing land treatment and structural measures on lands under its administration. The Agricultural Research Service furnishes assistance in the assembly, correlation, and analysis of economic data needed in the planning phases of the program. The Farmers Home Administration makes loans to local sponsors to finance their share of costs of the small watershed projects. The Weather Bureau and Geological Survey provide assistance in gathering and analyzing hydrological data. The Bureau of Land Management and the Bureau of Indian Affairs participate in the planning and installation of works of improvement on lands under their jurisdiction.

The Agricultural Research Service, Forest Service and the Soil Conservation Service cooperate with other Federal, State and local public agencies in making surveys and investigations of the watersheds of rivers and other waterways for the development of coordinated water resources programs.

Flood Prevention Program Activities:

Pursuant to the Flood Control Act of June 22, 1936, as amended and supplemented (33 U.S.C. 701-709), and under policies established by the Secretary, the Service has general responsibility for administration of the Flood Prevention program of the Department, and the formulation and development of

its guiding principles and procedures. Since the passage of the Watershed Protection and Flood Prevention Act, P. L. 566, 83rd Congress, the Flood Prevention program is limited to the planning and installation of watershed improvement measures, primarily for flood prevention, in the 11 authorized watersheds.

The Soil Conservation Service plans and installs works of improvement such as floodwater retarding structures, stream-channel improvements, gully stabilizing and sediment control measures, diversions, floodways, etc., in cooperation with soil conservation and flood control districts and other State and local agencies. The Service also provides technical assistance to landowners to accelerate the installation of land treatment measures which contribute to flood prevention.

The Forest Service participates, generally by cooperating with State foresters, in planning and providing intensified fire protection and certain technical forestry assistance to landowners in applying forest and woodland improvement measures on non-Federal lands and by installing land treatment and structural measures on lands under its administration.

Water Conservation and Utilization Program Activities:

Under the authority of the Acts of August 11, 1939 and October 14, 1940 (16 U.S.C. 590-y-z-10), as amended and supplemented, June 28, 1949 (63 Stat. 277) and September 6, 1950 (7 U.S.C. 1033-39) the Service carries on a water conservation and utilization program in the Eden Valley project in Wyoming. This work has been completed on all other projects planned for development. Irrigated and irrigable lands (both Government and privately-owned) are developed for efficient use of irrigation water. Settlement opportunities are provided for veterans and needy farm families through the sale of newly-developed farm units. Technical assistance is furnished to settlers within the authorized project area to aid them with their soil and water conservation and land use problems.

Great Plains Conservation Program Activities:

The Service has general responsibility for administration of the Great Plains Conservation Program of the Department. Under this program, authorized by P.L. 1021, 84th Congress, the full impact of all related activities of the Department are brought to bear on soil and water conservation problems on individual farms and ranches in the ten Great Plains States. The program provides for (a) long-term cost-sharing with farmers and ranchers in designated counties of the ten Great Plains States to aid them to achieve a more stable agricultural production, protect their lands from erosion, and develop farming and ranching practices to cope more adequately with the climatic hazards which characterize the area, and (b) technical and other assistance in planning, scheduling, and installing the essential soil and water conservation measures, farming systems, and land-use adjustments upon which the contracted cost-sharing arrangements are based.

A continuing inter-agency committee, consisting of representatives of the Soil Conservation Service, Agricultural Conservation Program Service, Agricultural Marketing Service, Agricultural Research Service, Commodity Stabilization Service, Farmers Home Administration, Federal Crop Insurance Corporation, Federal Extension Service, Forest Service and Office of Information, has been designated to recommend program policies, procedures, and regulations and to

review program progress and assure effective coordination of all Departmental resources in the program. The representative of the Soil Conservation Service is chairman of the inter-agency committee. Full cooperation of State and local governmental agencies and of other groups, organizations, and individuals having an interest in or affected by the program is encouraged.

Program Administration:

The Soil Conservation Service maintains its central office in the District of Columbia but most of its activities are highly decentralized to offices in 50 states and Puerto Rico, six cartographic units, six engineering and watershed planning units, and about 3,225 area and work unit headquarters which carry on the technical programs of the Service in conservation districts, watersheds, and water conservation and utilization projects. In addition, the Service has about 50 specialists in the fields of agronomy, soils, biology, forestry, information, plant materials, and range conservation who are attached to the Washington office but located at various points in the field, to provide for necessary program coordination and the technical assistance in these specialty fields.

As of November 30, 1959, the Soil Conservation Service had 14,300 full-time employees (262 in Washington and the balance in the field) and 2,763 part-time employees. The latter are generally employed in the field during the seasonal periods when there is need for additional assistance in applying conservation practices.

	Appropriated, 1960	Budget Estimates, 1961
Appropriated funds:		
Conservation operations	\$82,322,000	\$82,882,000
Watershed protection	a/ 22,750,000	a/ 27,750,000
Flood prevention	a/ 13,000,000	15,000,000
Great Plains conservation program	a/ 10,000,000	10,000,000
Water conservation and utilization projects	a/ 75,000	- -
Total	<u>133,147,000</u>	<u>135,632,000</u>

a/ In addition, prior year balances available.

Summary of Appropriations, 1960, and Estimates, 1961

Appropriation Item	: :Appropriated, : 1960	: : Budget : Estimates, : 1961	:Increase (+) : or :Decrease (-)
Conservation operations	: \$82,322,000:	: \$82,882,000:	: \$560,000
Watershed protection	: <u>a/</u> 22,750,000:	: <u>b/</u> 27,750,000:	: 5,000,000
Flood prevention	: <u>c/</u> 13,000,000:	: 15,000,000:	: -3,000,000
Great Plains conservation program.....	: <u>d/</u> 10,000,000:	: 10,000,000:	: - -
Water conservation and utilization projects	: <u>e/</u> 75,000:	: - -	: -75,000
Total	: 133,147,000:	: 135,632,000:	: 2,485,000

a/ In addition, \$9,526,964 is available from prior year balances of which \$2,250,000 is estimated to be carried over for use in the 1961 fiscal year.

b/ In addition, \$2,250,000 is estimated to be available from prior year balances.

c/ In addition, \$2,845,992 is available from prior year balances.

d/ In addition, \$629,120 is available from prior year balances.

e/ In addition, \$109,803 is available from prior year balances of which \$60,000 is estimated to be obligated in the 1961 fiscal year, and \$49,803 in subsequent years.

(a) Conservation Operations

Appropriation Act, 1960 and base for 1961	\$82,322,000
Budget Estimate, 1961	<u>82,882,000</u>
Increase	<u>+560,000</u>

SUMMARY OF INCREASES AND DECREASES, 1961

Decrease due to providing a direct appropriation to the General Services Administration for certain leasing costs previously paid from this appropriation	-40,000
For employee health benefit costs pursuant to Public Law 85-382	+600,000

PROJECT STATEMENT

Project	1959	1960 :(estimated):	Increase or Decrease		1961 :(estimated)
			Health Bene- fit Costs :(P.L. 85-382):	Other	
1. Assistance to soil conservation districts and other cooperators:					
(a) Planning, application, and maintenance of practices	\$79,410,590	\$81,742,000	+\$597,000	-\$40,000(1)	\$82,299,000
(b) Observational field testing of conservation plant materials	569,692	580,000	+3,000	- -	583,000
Subtotal a/	79,980,282	82,322,000	+600,000	-40,000	82,882,000
Unobligated balance ...	902,518	- -	- -	- -	- -
Total employee health benefit costs (P.L. 85-382)	[- -]	[- -]	[+600,000]	[- -]	[+600,000]
Total available or estimate	b/80,882,800	82,322,000	+600,000(2)	-40,000	82,882,000
Transferred from "Conservation reserve program, Commodity Stabilization Service"	-6,102,800				
Total appropriation ...	<u>74,730,000</u>				

a/ Represents obligations. Applied costs for 1959 are \$80,315,620. The difference of \$335,338 reflects, primarily, the excess of equipment used over orders placed in that year.

b/ Includes \$846,814 obligated in 1958 under the advance procurement authorization (P.L. 85-386).

INCREASE AND DECREASE

(1) A decrease of \$40,000 due to provision in the direct appropriation to the General Services Administration for leasing costs previously paid from this appropriation. The decrease of \$40,000 represents those Soil Conservation Service leasing costs which will be assumed by the General Services Administration in the 1961 fiscal year, pursuant to authorities contained in Section I of Reorganization Plan number 18 of 1950 for the gradual transfer of certain space assignment and leasing functions of the various Federal agencies to GSA.

(2) An increase of \$600,000 is required to meet employee health benefit costs pursuant to Public Law 85-382, applicable to the base for 1961. A full explanation of health benefit cost estimates appears in the "Preface" at the beginning of the Explanatory Notes.

STATUS OF PROGRAM

Current Activities: The Act of April 27, 1935 (16 U.S.C. 590a-590f), in recognition of the wastage of soil and moisture resources on farm, ranch, and forest lands of the Nation resulting from soil erosion and the damages caused thereby, authorized a program of measures to be carried out to prevent it. The work provided for under this item of bringing about needed land use adjustments and planning and establishing soil and water conservation measures on farm and ranch lands, is carried on primarily in cooperation with soil conservation districts. These districts are local units of government organized under State laws and responsible to the landowners and operators in the districts and to the State legislatures. They are founded upon the sound principle of local initiative, direction, and control and are formed only in response to the petition and favorable referendum vote of the landowners and operators within the district boundaries. By the end of the 1959 fiscal year 2,861 soil conservation districts had been organized in all 50 States, Puerto Rico, and the Virgin Islands.

Soil conservationists and other technicians of the Soil Conservation Service are assigned to work with farmers and ranchers in developing conservation plans which provide for proper land use and the application of right combinations of soil, water, and plant conservation measures on their individual farms or ranches. Service personnel also provide needed engineering and other technical assistance in establishing planned measures. Thus the practical experience of the farm or ranch operator is combined with the scientific knowledge and skills of professional conservationists, who have proficiency in a wide range of technical fields, in planning and carrying out locally-adapted programs of soil and water conservation.

The following types of assistance are being furnished to landowners and operators under this item:

1. The services of soil scientists who make standard soil surveys and conduct special soils investigations essential to successful conservation planning and the making of sound recommendations for the use and treatment of each acre of agricultural land. The soil surveys are conducted cooperatively with the land grant colleges and other State and Federal agencies. Published survey reports and soil maps provide valuable information also needed in other Federal, State, county and local programs involving land use. Appropriate detailed soils investigations are also made to guide structural design or conservation practice specifications in special or unusual cases.
2. The services of professional soil conservationists and other technical specialists who help farmers and ranchers plan individual conservation programs for their farms or ranches. These jointly-developed programs for the orderly adjustment of the use and treatment of the land are consistent with the land facts disclosed by the soil survey, and the labor, equipment, and financial resources of the landowners and operators.

3. The services of engineers, soil conservationists, aids, and other technicians who provide assistance to farmers and ranchers in installing conservation measures on their lands. This help includes necessary site investigations, surveys, preparation of construction plans and specifications, and performance inspection.
4. Technical assistance to group enterprises on soil conservation and water control problems that can only be solved by group action of landowners and operators. These problems may involve irrigation or drainage of valuable agricultural land, or stabilization of critical erosion and runoff areas to protect agricultural, industrial, or urban properties from flooding and sediment damage. Service engineers and other specialists provide consultation and technical assistance for the investigation, design, and installation of the treatment needed.
5. The grant to soil conservation districts of earthmoving and other special types of equipment which is acquired from Federal Government surplus at no cost to the Soil Conservation Service. The districts schedule this equipment for use by farmers or ranchers in establishing conservation practices on their lands. Generally this equipment is the kind that is not readily available locally or is not attainable at reasonable cost to the farm or ranch operator.
6. Streamflow forecasts developed from snow surveys in the Western States which serve as a basis for planning for efficient seasonal utilization of available water for irrigation and other purposes.
7. The selection and testing of promising conservation plant materials to determine their suitability for erosion control purposes, and cooperation with commercial concerns to promote adequate production, propagation and utilization of new and uncommon strains of vegetative planting materials for conservation uses.
8. Technical assistance to Agricultural Conservation Program participants in the planning, lay-out, and establishment of specified conservation practices, both within and outside conservation districts. The major share of the total cost of this work is reimbursed to the Service from ACP funds provided by the respective county Agricultural Stabilization and Conservation Committees.

In addition, in cooperation with other Federal, State and local agencies or groups, some special technical assistance on conservation measures, soil characteristics and limitations, and land use problems is also given to farmers, ranchers, public and quasi-public organizations and other groups, both inside and outside of conservation districts. (Only about 5 percent of the farms and ranches and about 10 percent of the land in farms in the continental United States is outside of organized conservation districts.) For example, borrowers under the Soil and Water Conservation Loan Program of the Farmers Home Administration are usually provided with investigative, design, specification and

installation services for the structures or measures for which the loan is made. Consultation and some planning and installation services are also being provided to other Departmental agencies, and to such organizations as State Agricultural Experiment Stations, State Highway Departments, City and County Planning or Zoning Boards, School Boards and Tax Commissions on runoff and floodwater problems, soils interpretations, erosion control, drainage and land use. Limited amounts of assistance are also provided on occasion to other cooperating groups or individuals on programs to develop better local understanding of erosion, water and land use problems and encourage more widespread adoption of conservation farming methods.

Selected Examples of Recent Progress:

Organization of New Soil Conservation Districts

During the fiscal year 1959, a total of 72 new soil conservation districts were formed but 17 districts were dissolved, making a net increase of 55 districts. Sixteen of the dissolved districts became parts of new districts. Six of the new districts were organized as the result of division of multiple-county districts. A total of 106 additions, comprising 20,814,880 acres were made to 88 existing districts during the year. The net total increase in acres in soil conservation districts in the fiscal year 1959 was 28,649,887 acres. As of June 30, 1959, farmers and ranchers in the 50 States, Puerto Rico, and the Virgin Islands had organized a total of 2,861 conservation districts, comprising a total area of 1,661,968,284 acres. Nineteen States, Puerto Rico, and the Virgin Islands are completely covered by districts.

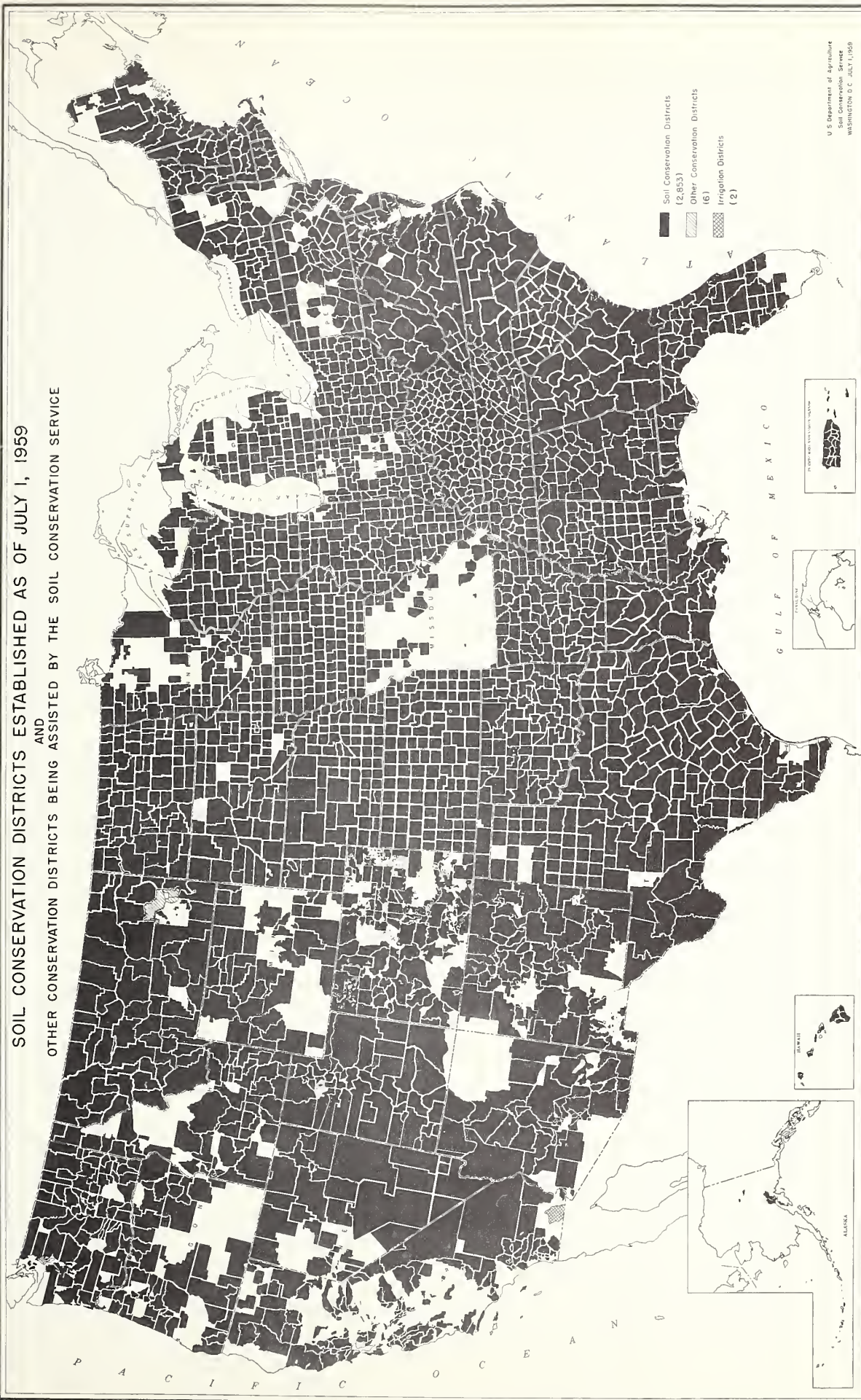
It is anticipated that 30 new districts will be organized in the fiscal year 1960 and another 20 in 1961, which would bring the total to 2,911 districts organized as of June 30, 1961.

Conservation Districts Organized as of July 1, 1959

Kind of District	Location	Number of Districts	Approximate Area (Acres)	Number of Farms
Soil Conservation Districts	47 States	2,802	1,645,841,941	4,509,192
Soil Conservation Districts	Caribbean Area	18	2,269,711	54,270
Soil Conservation Districts	Hawaii	16	3,384,432	4,979
Sub-districts	Alaska	9	4,391,000	924
Work Area (called districts)	Connecticut	8	3,135,360	15,615
Grass Conservation Districts	Montana	6	1,933,850	452
Elephant Butte Irrigation District	New Mexico	1	127,000	181
Imperial Irrigation District	California	1	884,990	4,838
Total Conservation Districts		2,861	1,661,968,284	4,590,451

The following map shows the conservation districts which had been organized as of July 1, 1959.

SOIL CONSERVATION DISTRICTS ESTABLISHED AS OF JULY 1, 1959
AND
OTHER CONSERVATION DISTRICTS BEING ASSISTED BY THE SOIL CONSERVATION SERVICE





Number of Farms and Acreage in Conservation Districts

Date	: Number of : Districts : Organized	: Total Acres : in Organized : Districts	: Approximate : Acres : In Farms	: Number of : Farms in : Districts
<u>Actual</u>	:	:	:	:
June 30, 1958	: 2,806	: 1,633,318,397	: 1,036,336,197	: 4,548,917
Average per district	: --	: 582,081	: 369,329	: 1,621
June 30, 1959	: 2,861	: 1,661,968,284	: 1,053,653,000	: 4,590,451
Average per district	: --	: 580,905	: 368,281	: 1,604
<u>Estimated</u>	:	:	:	:
June 30, 1960	: 2,891	: 1,683,000,000	: 1,070,000,000	: 4,650,000
Average per district	: --	: 582,152	: 370,114	: 1,608
June 30, 1961	: 2,911	: 1,697,000,000	: 1,082,000,000	: 4,690,000
Average per district	: --	: 582,961	: 371,694	: 1,611

Advancing Conservation Through Informational Activities

Educational institutions and youth organizations make increasingly heavy demands for informational materials and services, with greatest measurable response from National educational organizations. During the fiscal years 1958 and 1959, more than 1 million publications especially adapted to teacher use were distributed by 18 State Departments of Education to more than half a million teachers. This does not include requests for publications from the general public, averaging about 2,400 a month. At the request and with the financial assistance of the National Science Teachers Association 55,000 copies of conservation publications were made available to 15,000 teachers. Work with teachers and leaders in vocational agriculture (Smith-Hughes) and chapters of Future Farmers of America also continues to stimulate the use of conservation measures.

More than 35,000 Boy Scouts visited the soil and water conservation exhibit during the National Jamboree at Valley Forge in 1957. A conservation booklet, prepared jointly by Federal resource agencies and published by the National Council, Boy Scouts of America, was distributed to more than 60,000 scout executives, leaders and boys.

The Service developed a special publication, "Soil and Water Conservation Activities--A Guide for Leaders of Camp Fire Girls." It was distributed nationally to staff members and voluntary leaders by Camp Fire Girls, Inc. Work with the program directors of this organization contributed materially to the development and printing of a 72-page leaders' handbook entitled "Conservation."

Soil Conservation Service publications and technicians assisting in leader training and guidance prompted 25,000 outdoor good turns in the 1959 Girl Scout "Outdoor Good Turns" project, including many soil and water conservation activities. Last July the Service provided technical leadership in setting up a conservation demonstration for 10,000 girls and leaders attending the Senior Girl Scout Roundup in Colorado. A Service-prepared booklet, "Conservation DOs and DON'Ts:...Observations and Activities for Girl Scouts in Camp," was published by State agencies.

The Federal Extension Service distributed to State 4-H Club Leaders about 100,000 copies of the Soil Conservation Service publication, "Soil and Water Conservation Projects and Activities--A Guide for 4-H Club Leaders." More than 2-1/4 million boys and girls in 90,000 4-H Clubs have participated in the 4-H soil and water conservation project, now in its 16th year.

Progress on Conservation Needs Inventory

Substantial progress has been made during the past year on the National Inventory of Soil and Water Conservation Needs. Eight Department agencies in cooperation with State and local agencies and groups are making the inventory in all counties in the United States. The inventory comprises two major segments; (1) an inventory of land use, conservation problems, and acreage needing treatment, and (2) an inventory of the problems on the nation's small

watersheds. Estimates in (1) will show the present acreage in major land uses, the acreage of each land use on various kinds of soil, the changes in land use expected to occur by 1975, and the acreage of land by kinds of problems and need for treatment. The inventory of watershed project needs will show the nature and scope of water management problems that, if met, would require watershed projects of a type and size that qualify for assistance under Public Law 566, 83rd Congress, as amended.

Soil surveys showing kind of soil, slope, erosion, and land use on representative sample areas were completed in over 90 percent of the nation's 3,070 counties by June 30, 1959. The balance of these sample area surveys will be completed by the fall of 1959. The Conservation Needs Inventory is scheduled for completion January 1, 1960. After completion of the inventories in the various States, several months will be required for review and development of national summaries.

It is expected that the inventory will have wide use locally in the counties as well as by various agencies of the Department. It will provide essential data on soils and land use and on 20,000 or more small watersheds, which will be useful in developing sound plans for conservation of the nation's soil and water resources. Information included in the inventory on soil and water conservation needs can be interpreted for programming conservation action, educational, and research programs and for distribution of the resources available to the Department, States, counties, and soil conservation districts for these programs.

Survey Accomplishments

The following table shows the major survey accomplishments of the Service in assisting soil conservation districts and other cooperators. The two major types of surveys conducted by the Service are defined as follows:

- (1) Soil surveys are those where soil series, types, slope gradients, and erosion conditions and their boundaries are determined in detail by actual field examination and where classification is in accordance with the standard nationwide system of soil classification, to furnish information for conservation planning, land inventories, publication, and other purposes.
- (2) Range surveys are those made of different range sites and range conditions. A range site is an area or areas of similar soil and climatic conditions capable of producing essentially the same kind and amount of climax vegetation. The range condition is determined by the kind and amount of vegetation present on the range site and is classified as excellent, good, fair or poor. Both range site and range condition are delineated on a map after actual examination in the field (usually with the rancher). The maps are used for conservation and watershed planning on range lands.

Some reconnaissance surveys not tabulated below, are made on a broader basis for problem area delineations and broad program planning.

SURVEYS:

Types of Survey:	Unit	1959 Actual	Total as of 6/30/59	1960 FY Estimate	1961 FY Estimate
Soil Surveys ...	Acres	48,030,068	615,995,364	52,000,000	55,000,000
Range	Acres	14,044,531	93,516,572	15,000,000	15,000,000

Publication of Soil Survey Reports

Thirty-four edited soil survey reports with accompanying map materials were sent to the Government Printing Office during the 1959 fiscal year. At the close of the fiscal year there was a total of 63 reports in the Government Printing Office awaiting publication. Thirty-seven soil survey reports were published in the fiscal year 1959 as compared with 16 reports published in the previous fiscal year. The areas covered by the soil survey reports published in the fiscal year 1959 were as follows:

DeKalb County, Ala.	Curry County, N. Mex.
Morgan County, Ala.	Duplin County, N. C.
Santa Clara Area, Calif.	Watauga County, N. C.
Hillsborough County, Fla.	Clark County, Ohio
Manatee County, Fla.	Deschutes Area, Oreg.
Fulton County, Ga.	Clarion County, Pa.
Tift County, Ga.	Potter County, Pa.
Carroll County, Ind.	Brookings County, S. Dak.
Allamakee County, Iowa	Bradley County, Tenn.
Monona County, Iowa	Franklin County, Tenn.
Saline County, Kans.	Greene County, Tenn.
St. Mary Parish, La.	Henry County, Tenn.
Faribault County, Minn.	Brazos County, Tex.
Fillmore County, Minn.	Cherokee County, Tex.
Isanti County, Minn.	Prince Edward County, Va.
Bolivar County, Miss.	Island County, Wash.
Sunflower County, Miss.	Thurston County, Wash.
Bitterroot Valley Area, Mont.	Barron County, Wis.
Wibaux County, Mont.	

As of June 30, 1959, editing of 11 soil survey reports was in progress and the manuscripts of 37 soil survey reports, most of them written in the calendar year 1958, were awaiting review by the editorial staff. A schedule has been prepared of the areas for which soil survey reports are to be published during each of the next ten years.

A study was completed in July 1959 to determine who uses published soil survey reports, what they are used for, and how they can be improved. Approximately 13,000 questionnaires were mailed to local people (mostly farmers and ranchers)

in 19 counties in 19 different States, and about 2,800 questionnaires were mailed to people having area, State, or regional responsibilities. Included in this latter group were employees of land grant colleges, credit agencies, life insurance companies, and various local, Federal, and State agencies and groups. Summaries of the replies showed that a large majority of the people in both groups used the reports and most of them had found them very useful and helpful in the conduct of their business or profession. A number of suggestions for improvement in the text and maps were made. Many of these have already been incorporated in recent soil survey reports.

Uses of Soil Survey Reports

Most of the soil survey reports sent to the Public Printer during the fiscal year 1959 contain useful engineering sections prepared jointly by engineers and soil scientists familiar with the soils and engineering problems of the areas covered by the reports. In addition, woodland sections are being prepared jointly by soil scientists and woodland conservationists for most soil survey reports where woodland production is important. This interpretation should also prove to be very helpful to farmers and others in evaluating the alternative uses that can be made of their land.

Improved climatic sections are being prepared for soil survey reports. Instead of including only the normal weather statistics, predictions relative to the probability of frost damage, low rainfall, etc., furnished by the Weather Bureau are being included. These data can be interpreted in terms of crop production, crop selection, soil loss under specified management, or for other purposes.

Western Rangeland Soils Being Studied

Little is known of the response of native forage plants to soil differences. Traditionally soil surveys have been based upon accumulated knowledge and experience of the response of cultivated crops to soil differences. A two-man study project to improve both soil survey mapping procedures and the technical assistance provided to rangeland owners was established during the fiscal year 1959 with headquarters at Salt Lake City, Utah. The study is to determine the range of soil, climatic and vegetation characteristics that are consistently associated together under natural conditions. Undisturbed areas supporting blue bunch-wheatgrass and other associated natural vegetation are being studied as related to the varying climatic and soil conditions where this kind of vegetation is found in Colorado, Wyoming, Utah, Nevada, Idaho, Oregon and Washington.

Study and analyses are already beginning to reveal some of the soil, plant, and climatic relationships that exist. As more precise knowledge is gained,

soil survey mapping procedures will be improved. Other important benefits will be realized from better knowledge of the forage yields that can be expected from certain soils, the fluctuations in yields resulting from climatic variations, and improved criteria for determining the condition of the range. This information will improve the technical services being furnished to landowners and enable them to conserve and improve their rangelands more rapidly.

Interpretations of Soil Surveys Stimulate Woodland Conservation

The interpretation of soil surveys has contributed greatly to the development of improved techniques for planning and applying soil and water conservation practices on lands best suited to growing wood crops. In the many areas where these interpretations have been made, technicians have, for the first time, a scientific explanation of the significant facts about tree growth, and a basis for predicting results from the application of conservation practices. For example, it is now known that "Christmas trees" will not grow properly on certain soils. If trees are planted on them for that purpose, intensive treatments such as brush and weed control or annual shearing is necessary. Such facts are causing foresters and other technicians to re-appraise the suitability of certain lands for growing these and other trees and to investigate the applicability of some practices.

Woodland interpretations of soil surveys have been given even greater utility through a grouping into woodland suitability groups those soils on which trees grow at an equal rate and respond similarly to conservation treatments. Combining these data into woodland suitability groups has greatly increased the effectiveness and efficiency of field personnel because the amount of time required to learn the interpretations is reduced. For example, soil mapping units in a survey area may exceed 100, but these may be combined into only 10 woodland suitability groups. This has also increased the technicians' ability to make proper use of the information.

These interpretations and their groupings provide a common denominator by which technicians trained in different fields can understand and analyze the conservation problems on woodlands. The value of this information is further enhanced because it is understood and usable by landowners. Most landowners have a good knowledge of and interest in their soils. It is therefore easier for them to understand the need, value, and methods of applying conservation practices when it is related to the soil. The increased interest in such interpretations of soils information has been particularly noticeable among forest industry employees. As a result people who were not previously interested are now making considerable use of soils information.

Development of Coastal Wetlands for Wildlife

There is a band of coastal soils extending from New Jersey to Texas referred to as "cat clays" which, when drained and dried, become barren after a few years. They contain large quantities of iron sulfides and polysulfides. As long as the soil is wet, the sulfides continue to exist in that form and the soil is usually only slightly acid. However, when these soils are drained, the sulfides oxidize to form sulfates and sulfuric acid. The acidity of the soil increases rapidly and within five years neither crops, pasture, nor duck foods will grow. Furthermore, this barren condition lasts for an undetermined number of years. Service technicians who assist farmers in planning the use of these lands must exercise care that conditions are not created that will ruin the land. Except for a rice-type of agriculture, the safe use of brackish-marshes with "cat clay" soils is limited to the production of native range forage, fish, or wetland wildlife.

Techniques have been developed by Service biologists for utilizing these "catclay" areas in the production of waterfowl. With proper care, browntop millet can be grown in many of the old rice fields of the Southeast and managed for duck food so that there is little danger of producing a high acid condition in the soil. Japanese millet, coast cockspur, and several species of smartweeds -- all good duck foods -- can be grown on wetter soils than can the browntop millet, by temporary lowering of the water table. Widgeongrass, which is a choice food of many kinds of ducks, grows very well in water of about one-third sea strength, is ideal for use in many of the brackish water marshes.

Another promising use of the more saline marshes is the development of salt water impoundments for growing commercial crops of shrimp, oysters, and mullet.

Number of Cooperators and Conservation Plans

Item	Active		Net Increase in
	District Cooperators		SCD cooperators
	Number	Acres	and basic plans
<u>As of June 30, 1958</u>			<u>Fiscal Year 1958</u>
No. soil conservation	:	:	:
district cooperators....	: 1,794,411	: 539,561,777	: 66,729
SCD cooperators having	:	:	:
basic plans	: 1,218,433	: 345,388,583	: 56,688
No. basic plans fully	:	:	:
applied	: 202,274	: 42,059,466	: 11,712
<u>As of June 30, 1959</u>			<u>Fiscal Year 1959</u>
No. soil conservation	:	:	:
district cooperators ...	: 1,859,439	: 563,743,296	: 65,028
SCD cooperators having	:	:	:
basic plans	: 1,279,634	: 365,115,020	: 61,201
No. basic plans fully	:	:	:
applied	: 210,015	: 43,217,542	: 7,741
<u>As of June 30, 1960 (Est.)</u>			<u>Fiscal Year 1960 (Est.)</u>
No. soil conservation	:	:	:
district cooperators ...	: 1,900,000	: 576,080,000	: 40,561
SCD cooperators having	:	:	:
basic plans	: 1,325,000	: 378,022,500	: 45,366
No. basic plans fully	:	:	:
applied	: 218,000	: 44,864,400	: 7,985
<u>As of June 30, 1961 (Est.)</u>			<u>Fiscal Year 1961 (Est.)</u>
No. soil conservation	:	:	:
district cooperators ...	: 1,950,000	: 591,240,000	: 50,000
SCD cooperators having	:	:	:
basic plans	: 1,375,000	: 392,287,500	: 50,000
No. basic plans fully	:	:	:
applied	: 227,000	: 46,716,600	: 9,000

During the fiscal year 1959, a total of 113,351 additional farmers and ranchers became district cooperators, which increased the cumulative number of cooperators to 1,859,439, as of June 30, 1959. Changes in ownership, death, and cancellations caused a loss of 48,323 cooperators during the year, resulting in a net increase of 65,028 cooperators in 1959. Also, a total of 92,801 basic conservation plans were developed in 1959. However, losses during the year resulted in a net increase of only 61,201 basic plans as of June 30, 1959.

Planned and Established Conservation Pays Off

Planned and established soil and water conservation is improving family living, income, and the land in underdeveloped agricultural areas throughout the country. As one specific example of what conservation farming has meant to many low income rural families, it has helped a farmer who previously share-cropped a 140 acre farm in Jefferson County, Arkansas, with his father, to become a landowner and later to be named "Outstanding Young Farmer of 1957" in that county.

In 1953, with financial assistance from a friend, he was able to purchase a 200 acre farm in Jefferson County. In July of that year he applied for assistance from the Jefferson County Soil Conservation District as he had become convinced that conservation farming pays. With planning and technical assistance from the Soil Conservation Service, he cleared and leveled land, installed a complete drainage and irrigation system, constructed reservoirs for irrigation and rice-fish rotation, established improved pastures, managed land for wildlife, and followed all good management practices. All of this work was expensive and the cost had to be spread over a period of years, but it has paid off in many ways.

This young farmer now owns and operates 561 acres of which 236 acres are devoted to crops on which he plants 61 acres of rice, 40 acres of which are rotated with a crop of fish, 67 acres of cotton, 40 acres of beans, and 28 acres of grain for feed. He has 217 acres of pasture, and although not all of it has as yet been improved, he is able to carry 85 head of cattle and 108 acres have been placed in the conservation reserve. As a result of increased production through conservation farming, he was able to increase his holding from 200 acres to 561 acres. He now has adequate equipment which is paid for and the mortgage on the land is low.

Basic Conservation Planning in Soil Conservation Districts
By States and Nationally, June 30, 1959

Of the 1,656,478,121 acres of total land area in the 2,847 conservation districts in the 50 States and the Caribbean Area as of June 30, 1959, about 1,242,189,985 acres were agricultural land on which the Service, in its cooperation with the districts, was authorized to work. This acreage consisted of about 4,755,199 operating units, which is approximately 90 percent of the land in farms and 95 percent of the farms and ranches in the United States. As of June 30, 1959, the Soil Conservation Service was cooperating under formal agreement with 2,814 of the districts.

Basic conservation plans had been prepared with Service assistance on about 1,279,634 farms and ranches, comprising 365,115,020 acres of agricultural land as of June 30, 1959. This was about 27 percent of all the operating units in districts and 29 percent of the agricultural land in districts. Variations in these percentages by States and broad geographical areas are shown in the table on the following pages.

The Service's long-term objective recognizes that nationally there is a need for major revisions of basic conservation plans within a 10-year period to keep them up to date. Therefore, the annual workload on such revisions would be about 10 percent of the plans on hand at any given time. However, during fiscal years 1957, 1958, and 1959, the reported revisions each year were about one percent of the basic plans then on hand. With the increased age of districts and the basic plans prepared with cooperating farmers and ranchers, there will be a need for increased rate in the number of revisions made each year.

Basic Conservation Planning in Soil Conservation Districts
By States and Nationally, June 30, 1959

States	Total SCD's as of 6/30/59	Agricultural Land in SCD's	Operating Units in SCD's	Basic Conservation Plans Prepared as of 6/30/59		% of Operating Units Planned	% of Agric. Land Planned
	Number	Acres	Number	Number	Acres	%	%
Northeast							
Connecticut	8	2,552,948	36,669	2,662	284,546	7.2	11.1
Delaware	3	1,012,796	7,605	1,477	239,359	19.4	23.6
Maine	15	15,506,924	30,300	6,044	1,275,536	19.9	8.2
Maryland	24	4,842,075	32,949	10,711	1,531,133	32.5	31.6
Massachusetts	15	1,930,714	22,882	6,241	649,040	27.3	33.6
New Hampshire	10	5,563,345	31,391	4,034	672,786	12.8	12.1
New Jersey	14	3,734,388	29,945	5,366	570,830	17.9	15.3
New York	46	16,340,278	114,817	23,715	3,075,598	20.6	18.8
Pennsylvania	51	11,225,195	106,970	18,291	2,129,287	17.1	19.0
Rhode Island	3	485,000	3,392	964	115,600	28.4	23.8
Vermont	13	5,389,273	36,855	5,478	1,071,691	14.9	19.9
Virginia	29	21,182,031	134,012	32,114	5,284,412	24.0	24.9
West Virginia	14	12,730,755	71,399	26,464	3,694,342	37.1	29.0
Total	245	102,495,722	659,186	113,561	20,594,160	21.8	20.1
Southeast							
Alabama	50	27,205,737	141,744	45,706	7,761,584	32.2	28.5
Arkansas	76	29,489,506	147,883	56,854	11,635,681	38.4	39.4
Florida	59	23,905,561	48,769	19,521	6,570,781	40.0	27.5
Georgia	27	29,762,203	164,114	81,179	15,153,034	49.5	50.9
Louisiana	26	26,247,783	107,172	27,425	6,039,285	25.6	23.0
Mississippi	74	28,822,242	152,760	50,697	9,299,248	33.2	32.3
North Carolina	37	20,500,772	285,325	68,491	6,980,708	24.0	34.0
South Carolina	44	17,591,800	118,344	33,376	5,578,113	28.2	31.7
Tennessee	94	21,369,913	182,113	29,209	4,090,356	16.0	19.1
Caribbean	18	2,131,575	53,000	10,859	646,281	20.5	30.3
Total	505	227,027,092	1,401,224	423,317	73,755,071	30.2	32.5
Cornbelt							
Illinois	99	30,302,197	210,859	36,920	6,258,133	17.5	20.6
Indiana	80	16,451,172	122,078	18,947	2,792,340	15.5	17.0
Iowa	100	34,044,533	192,933	45,545	8,235,850	23.6	24.2
Kentucky	121	24,074,418	208,252	47,129	5,511,320	22.6	22.9
Michigan	75	25,089,467	192,141	20,521	2,621,925	10.7	10.4
Minnesota	81	27,696,793	131,130	21,699	4,311,845	16.5	15.6
Missouri	36	9,678,446	58,558	10,267	1,967,619	17.5	20.3
Ohio	87	19,698,700	149,312	36,181	4,962,460	24.2	25.2
Wisconsin	71	21,732,224	143,981	24,204	3,996,968	16.8	18.4
Total	750	208,767,950	1,409,244	261,413	40,658,460	18.5	19.5
Great Plains							
Colorado	96	29,822,099	39,356	12,109	11,082,564	30.8	37.2
Kansas	105	50,167,148	131,385	60,999	18,703,186	46.4	37.3
Montana	66	59,906,381	32,437	8,636	18,033,648	26.6	30.1
Nebraska	87	47,922,976	108,555	41,107	14,091,996	37.9	29.4
New Mexico	60	58,805,209	23,456	10,540	25,016,502	44.9	42.5
North Dakota	75	42,449,559	61,410	23,319	14,517,643	38.0	34.2
Oklahoma	87	39,199,163	147,032	76,603	19,517,393	52.1	49.8
South Dakota	68	43,593,418	61,998	23,119	12,263,437	37.3	28.1
Texas	174	156,226,801	358,510	125,440	67,098,580	35.0	42.9
Wyoming	44	22,004,222	9,892	3,772	5,527,680	38.1	25.1
Total	862	550,096,976	974,031	385,644	205,852,629	39.6	37.4
West							
Arizona	48	27,144,095	9,421	3,537	3,584,592	37.5	13.2
California	160	37,934,530	96,560	23,171	5,127,724	24.0	13.5
Idaho	51	18,428,219	36,132	5,617	2,306,476	15.5	12.5
Nevada	34	7,421,006	3,367	1,467	1,237,146	43.6	16.7
Oregon	57	21,016,304	52,384	6,739	2,854,169	12.9	13.6
Utah	48	13,780,732	25,085	8,239	4,744,834	32.8	34.4
Washington	76	23,438,115	82,326	16,061	3,933,708	19.5	16.8
Alaska	9	1,673,806	1,830	363	59,776	19.8	3.6
Hawaii	16	2,965,438	4,409	505	406,275	11.4	13.7
Total	499	153,802,245	311,514	65,699	24,254,700	21.1	15.8
National Total	2,861	1,242,189,985	4,755,199	1,279,634	365,115,020	26.9	29.4

Major Practices Applied on Farms and Ranches of
Soil Conservation District Cooperators
ACP Participants, and Other Landowners Assisted

Type of Practices	: Unit	: 1959 Actual	: 1960 Estimate	: 1961 Estimate
Contour farming	:Acres	: 2,070,458	: 2,000,000	: 1,950,000
Cover cropping	:Acres	: 3,116,221	: 3,500,000	: 3,500,000
Stripcropping	:Acres	: 727,663	: 710,000	: 700,000
Stubble mulching	:Acres	: 3,274,246	: 3,300,000	: 3,400,000
Proper range use	:Acres	:33,706,491	:34,000,000	:35,000,000
Pasture planting	:Acres	: 3,065,153	: 3,100,000	: 3,150,000
Range seeding	:Acres	: 1,696,193	: 1,800,000	: 1,900,000
Tree planting	:Acres	: 1,046,956	: 1,150,000	: 1,200,000
Windbreak planting	:Miles	: 3,823	: 4,500	: 5,000
Wildlife area improvement	:Acres	: 536,815	: 550,000	: 560,000
Terracing	:Miles	: 46,011	: 50,000	: 52,000
Diversion construction	:Miles	: 5,972	: 6,000	: 6,100
Pond construction	:Number	: 66,809	: 68,000	: 70,000
Waterway development	:Acres	: 65,573	: 66,000	: 67,000
Irrigation reservoirs	:Number	: 2,211	: 2,000	: 2,000
Sprinkler irrigation systems	:Number	: 3,283	: 3,100	: 3,000
Improved water application	:Acres	: 1,165,984	: 1,150,000	: 1,100,000
Irrigation water management	:Acres	: 469,836	: 500,000	: 500,000
Land leveling	:Acres	: 526,528	: 550,000	: 575,000
Farm drainage	:Acres	: 1,756,801	: 1,800,000	: 1,850,000
Open drains	:Miles	: 19,330	: 20,000	: 21,000
Closed drains	:Miles	: 24,059	: 25,000	: 25,500
Land clearing	:Acres	: 344,391	: 300,000	: 275,000

More than a hundred different practices and measures are used in the local programs of conservation districts, varying from place to place according to different needs of the land. The above listed practices represent those most commonly used throughout the country.

Changing Agriculture Increasing Demand for Technical Assistance

Farm turnover, the trend to fewer and larger farms, vertical integration, specialized farming, shifts in production needs and in acreage of crops, "rurbanization" and off-farm employment, and developments in research, technology, mechanization and financing have made farming increasingly complex. These agricultural adjustments and developments have increased the workload of the Service with respect to demands for technical assistance to farmers and ranchers in soil conservation districts in planning and applying soil and water conservation measures and making land use adjustments.

Ownership changes: Farm title transfers bring about changes when a new purchaser takes over. Frequently, this results in changing land use and treatment on a farm which had been previously established with technical assistance furnished by the Service. In recent years there has been an annual national turnover in farm and ranch ownership of about 5 percent. At this rate, the average farm or ranch in the United States will change ownership and need to be replanned about every 20 years for adjustment of crops and conservation measures.

Terracing: An example of a change in technology is the recently developed system of parallel terracing as contrasted to terraces irregularly spaced. Parallel terraces have the advantage of a reduced number of "point rows" and longer rows. With this system multiple row equipment can be used and the cost of production per unit is reduced through more efficient use of machinery, labor, and fuel. Many district cooperators are smoothing out the old terraces and replacing them with the new in areas where the terrain is uniform enough for this type of terrace. Laying out parallel terraces with cuts and fills requires approximately 50 percent more technical time per acre than for the irregularly spaced type.

Tillage: New research discoveries in minimum tillage systems of farming, of which "plow planting" of corn is an example, bring about a reduction in tillage operations used in crop production. This method reduces the cost of production, maintains yields, and at the same time does a better job of conserving soil and water as compared to conventional tillage operations. Many farmers with established conservation programs are requesting technical assistance in converting to minimum tillage operations.

Operation changes: Cotton farmers in the southeast in increasing numbers are converting their farming operations to grass, hay, cattle and trees. Other farmers make frequent changes in farm crops to meet production demands or because their interests change. This requires technical time to assist in replanning and reestablishing conservation programs to fit the new type of agriculture. In Spartanburg County, South Carolina, many farmers have made complete changes in their operations over the past thirteen years. One farmer in the Inman community was assisted in the preparation of a basic conservation plan 13 years ago. At that time, a large portion of the farm was in orchard. The trees were old and improved varieties were available so this orchard was removed. Row crops were planted which necessitated complete reterracing of these fields. Later the farmer decided to enter production of purebred beef cattle, consequently these fields were planted to pasture. This livestock operation, due to varying conditions, was decreased considerably and the landowner decided to reenter peach production. As a result, these fields were again planted to trees. Assistance in the application of conservation practices was necessary on every change, i.e., terracing and crop rotations in changing from orchard to row crops, establishing perennial vegetation in changing from row crops to livestock, and orchard layout in changing from livestock to peach production. Technical help was also provided in the installation of a storage reservoir for irrigation water.

Drainage: For years American farmers have depended solely upon tile lines and open ditches to provide drainage for their land. A recent and popular addition is smoothing or grading the land surface to eliminate low spots and further improve drainage. Old established crooked field drains are also being eliminated and new better aligned ditches are being established so that modern, efficient, multiple-row machines can be used. Many farmers are now requesting technical assistance in this work.

Irrigation: The older concepts of irrigation are changing rapidly primarily due to the competition for water and the cost of farm labor. Precise land levelling is a part of the answer. This practice provides better water distribution, reduces labor, and permits more efficient crop production. Demands for technical time in this work have increased ten fold in the past few years.

Water: The competition for the development and use of water resources between agriculture, industry, and municipalities is requiring more technical time in planning and establishing careful conservation and use of water.

Technical Assistance in "Rurban" Areas

Technical services to meet the conservation problems arising in "rurban" areas around large cities are being requested in ever increasing amounts. The solution of these problems requires careful consideration of the kind, amount, and priority of technical assistance that can be made available. The Soil Conservation Service and soil conservation districts are particularly concerned over the rapid conversion of good farmland around large cities and in other populous areas to suburban, industrial, and other non-agricultural uses. Such land use changes frequently create or are associated with many new soil and water management problems, such as reduction in water supplies, increases in erosion, sedimentation, and flood hazards, and pollution of streams and reservoirs. However, it is recognized that conversion of land to "rurban" use is often important to the nation's expanding economy.

The Service is providing consultation and technical guidance to individuals and groups where land use is being changed so as to prevent soil erosion, maintain good water management, and retain land well suited for agricultural production for farming purposes as long as possible. This assistance differs from that normally given to farmers and ranchers in soil conservation districts in that it is largely of the consultive type and does not normally lead to the development and application of a basic conservation plan unless the entire land unit is to be treated with all needed conservation measures or the landowner decides to make necessary land use changes so that all the land is used within its capability. This type of assistance consists principally of supplying information about soils and their interpretations, advice as to proper treatment and management of land for its conservation, and assistance on problems of flooding, drainage, and other types of water management.

The "rurban" conservation workload and the type and complexity of the problems on which technical assistance is requested varies widely throughout the populous areas across the nation. As one of the many examples, about 85% of the technician's time in the Fairfield Soil Conservation District of Connecticut, which is adjacent to New York City, is spent in servicing requests from "rurban" property owners. All of the requests for technical help received from January until August 1959 were from this group of people. During the calendar year 1958 more than 200 "rurbanites" became cooperators with the soil conservation district. Most of the people involved are employed in New York City and represent almost every type of business, industrial and professional field. They have little knowledge of soil and water problems and conservation but they want to make the best use of their land. The effectiveness of the technical assistance given is evidenced by the fact that many new requests for help come from the friends of those already assisted.

The following specific examples indicate the types of conservation assistance requested and given by the Service to "rurbanites" in the Fairfield Soil Conservation District of Connecticut. The towns of Danbury, Bethel, Newton, and Wilton, requested and received technical help in the construction of ponds for recreational purposes in their town parks. In Bethel and Ridgefield, assistance was given in the selection of school sites. Most of the sites under consideration were formerly farmland included in district farm and ranch conservation plans so soils information was already available as to the soil characteristics and suitability of the various sites. This assistance enabled the school boards to select excellent school sites that saved them several thousands of dollars over sites previously considered. Help was given to the Fairfield County Audubon Society and to individual "rurbanites" in developing ponds and other measures for wildlife improvement. The Bethel Zoning and Planning Commission received help with its soil and water problems. Most of the work was done with available soil maps. The commission was especially interested in the suitability of various soils for septic tank drainage since the town has no sewerage system.

Stubble Mulching in Great Plains

Stubble mulch farming is a year-round system of managing plant residues from harvest time to the time of seeding the next crop. Tillage operations are done with farm implements that keep most of the residues on or near the surface of the soil, thus reducing soil-blowing and losses from water erosion. During the 1958 fiscal year farmers in the Great Plains States applied this practice to 1,800,000 acres. In 1959 about 2,400,000 acres were stubble mulched.

Soil Conservation Service agronomists have developed a residue calculator which enables Work Unit Conservationists to quickly show farmers the number of tillage operations and types of tillage implements needed to keep sufficient amounts of residues on the soil surface, thereby reducing soil blowing. Some farmers in the Great Plains have been practicing stubble mulching for many years. With new techniques and better farm equipment, farmers should now be able to do a more effective job of reducing soil blowing on their fallow lands.

The research results of the past several years are now available which enable technicians in soil conservation districts to more readily convince farmers of the proper amount of residue needed on the soil at planting time to prevent serious soil blowing; to determine practical ways of estimating amounts of stubble on the soil; and to recommend the types of tillage equipment to use to keep residues on the soil surface. Farm equipment companies have aided in the advancement of this practice by manufacturing tillage and planting implements that enable the farmer to accomplish the desired results.

Snow Surveys and Water Supply Forecasting Procedures Improved

Increased emphasis was placed on interpretation of snow survey and water supply forecasting data in the fiscal year 1959. Individual soil conservation district-type reports which provide more useful information to local water users and interests were published in Nevada, Colorado, Oregon, Idaho, Washington, Montana, and Wyoming, in the latter four States for the first time. In the States where water shortages seemed certain, specific recommendations were made for adjusting conservation plans and establishing actual water-conserving procedures in order to make best use of limited water supplies. As an example of the good acceptance of these water supply forecasting reports by agricultural and other interests, a bank president in Wyoming had this to say in reply to a questionnaire concerning the value of the reports: "We have a very definite use for this report, as we are interested in knowing the snow conditions on the Big Horn Mountains as they affect our loan operations during the summer crop-growing season."

A training session on operation and maintenance of over-snow equipment was held in Missoula, Montana, in January, 1959. Operators and future operators of over-snow machines were given training in safety, in radio use, and upkeep of this equipment. This training will reduce repair bills and increase the efficiency of these machines and their operators. Safety and morale of over-snow machine crews was increased with the installation of two-way radios in several of the Service-owned over-snow machines. This communication system also increases the efficiency and safety of snow survey operations.

Technical recommendations were given to the Agricultural Research Service in 1959 to begin study of the feasibility of an automatic snow gage to read water equivalent of the snowpack automatically.

All of the Service's water supply forecasts for the State of Montana were programmed for electronic computer use. This computer now produces in 60 seconds, without error, work which formerly required a skilled engineer 8 hours to produce. A study was undertaken by the University of Arizona, after consultation with the Service, to find methods to improve water-supply forecasting procedures in that State, through use of electronic computers. Similar studies are planned in other States.

Technical Assistance on Group Enterprises

Items	: 1959 Actual	: Total as of 6/30/59	: 1960 Estimate	: 1961 Estimate
Watershed group jobs	:	:	:	:
Number	77	397	70	65
Acres	2,780,977	13,327,358	2,528,000	2,350,000
Group drainage jobs	:	:	:	:
Number	2,156	18,267	2,100	2,000
Acres	1,707,265	13,132,855	1,660,000	1,600,000
Group irrigation jobs	:	:	:	:
Number	491	3,237	475	460
Acres	824,409	4,466,707	797,000	770,000
:	:	:	:	:
:	:	:	:	:

Major Practices Applied on Group Jobs

Type of Practice	: Unit	: 1959 Actual	: 1960 Estimate	: 1961 Estimate
Ditch and canal excavation	(: Miles	1,753	1,700	1,600
	(: Cu.Yds.	14,264,477	13,830,000	13,000,000
Spoilbank leveling	: Cu.Yds.	5,085,647	4,930,000	4,600,000
Channel improvement	: Lin.Ft.	151,609	160,000	175,000
:	:	:	:	:

Drainage Problem Solved by Group Action

The completion of the "Tupelo Bay Drainage Project" in the Florence and Williamsburg Soil Conservation Districts in South Carolina in 1958 was a significant "group enterprise" accomplishment made possible by close cooperative work of the local people and various Federal and State agencies. Around Tupelo Bay there is good agricultural land mostly used for cultivated crops. But the fields are flat and natural drainage is poor. Crop yields were high in good years but in wet seasons crops drowned over much of the area. That drainage was needed was realized more than 10 years ago when a Service technician was assisting a landowner in the area to prepare a basic soil and water conservation plan for his farm. But there was no outlet. Upon further investigation it was found that the entire area was very poorly drained but in order to correct this situation a main canal would have to be dug through Tupelo Bay. To add to the difficulty of the job the canal would have to cross the double-tracked main line of the Atlantic Coast Line Railroad, a U. S. Highway, two State highways, and a county highway. There were also 96 landowners involved.

In 1956, interest in the project was revived and the local people organized into a group for concerted action. Help was requested from the two soil conservation districts and Service technicians completed investigations, surveys, plans and designs for the drainage project which were acceptable to the group. The job to be done required much hard work and close cooperation between local leaders, farmers, supervisors of two soil conservation districts, two agricultural stabilization and conservation county committees, county and State highway officials, the railroad, contractors, and local representatives of the Soil Conservation Service and Agricultural Conservation Program Service. The main canal that was constructed is $7\frac{1}{2}$ miles long and required excavation of 152,000 cubic yards of earth. It furnishes a main outlet for drainage of 10,600 acres in 96 farms. Lateral drains are being installed at a rapid rate to further improve on-farm drainage.

Current Plant Materials Center Activities

The adoption and use of many conservation practices needed to solve land use and soil and water conservation problems is dependent to a large extent upon the availability of suitable plant materials. The Service has established 17 plant materials centers to serve the needs of the States in the location, development, testing and use of promising plant materials for conservation work. Ten of these centers are managed by the Service and seven are managed by State agencies under cooperative agreements and annual work plans. One change in the location of these centers took place at the end of the fiscal year 1959 when the agreement with the University of Nebraska for the center at Scottsbluff was terminated by mutual consent. Negotiations are under way for the establishment of a center in Montana which is planned for management by the Service.

During the fiscal year 1959 the National Plant Materials Center at Beltsville, Maryland (which provides seed, plants, and technical services nationally through the other 16 centers) received and processed approximately 800 new accessions of potentially promising plants, most of them coming from foreign lands. Some 1,100 packets of seed were distributed and of this number about 300 packets went to 30 foreign countries partly in return for seed obtained from them.

The center established at Arcadia, Florida, in the fiscal year 1958, completed its land development, irrigation, and drainage and has many promising species and strains of plant materials now becoming available for limited field plantings. The two newest centers established in the west in 1958 are also now in full operation. The Corvallis, Oregon, center has produced enough seed from its small-scale increase plots for field size plantings. The center at Kahului, Hawaii, has produced its first seed crop of crotalaria juncea which is a promising subtropical legume that germinates readily and is nematode resistant.

There were many other important accomplishments in plant materials development and use. The Big Flats, New York, Plant Materials center developed a seed

huller-scarifier that works well on small lots of seed. In the southeast a number of common and uncommon plant materials were found to be useful in soil conservation. A vigorous new strain of bermuda grass, MK-37, which can be established easily and inexpensively from seed is now on the market and is finding good use for pasture and hay. Crown vetch was found to make a very effective and pleasing conservation cover on roadbanks. A native switchgrass, Pangborn, was found to be disease free and a superior forage and more effective in gully control than the best available strains now on the market. The seeding of browntop millet as duck food has been greatly extended. In the Northeast several species of grasses were demonstrated as having superior value in stabilization of ditch banks, erosion control in orchards, and in producing an effective cover on roadbanks and sand dunes. Considerable progress was made in the Cornbelt in extending the use of field brome as a conservation cover crop in corn and fruit orchards. Creeping foxtail was found to be a superior plant in wet meadows and waterways and sand livegrass very useful in stabilizing blow sand. Inventories of needs were made for trees and shrubs in the Northeast and for grass seed in the Great Plains which are enabling seed producers to better plan production and harvesting schedules to meet the conservation needs.



(b) Watershed Protection

Appropriation Act, 1960 and base for 1961	\$22,750,000
Budget Estimate, 1961	<u>27,750,000</u>
Increase	<u>45,000,000</u>

Note: In addition to the proposed increase in appropriation for 1961, there will also be available \$2,250,000 estimated unobligated balance to be carried forward from prior years for use in 1961.

SUMMARY OF INCREASES AND DECREASES, 1961

(On basis of available funds)

Decrease in project investigations and development of watershed work plans	-\$1,400,000
Decrease in the Federal share of the cost of installing planned works of improvement in the pilot watersheds due to completion of work	-2,750,000
Net increase for installation of works of improvement in P.L. 566 watershed projects	44,123,036

PROJECT STATEMENT

(On basis of available funds)

Project	1959	1960 (estimated)	Increase or Decrease	1961 (estimated)
1. Investigations and planning	\$4,663,610	\$4,900,000	-\$1,400,000(1)	\$3,500,000
2. Installation of works of improvement:				
(a) "Pilot" demonstration watersheds	5,578,067	5,250,000	-2,750,000(2)	2,500,000
(b) P. L. 566 watersheds ..	21,213,716	17,776,964	44,123,036(3)	21,900,000
3. Loans and related expense ..	427,454	1,000,000	- -	1,000,000
4. Surveys and investigations of water resources programs	886,022	1,100,000	- -	1,100,000
Total employee health benefit costs (P.L. 86-382)	- -	- -	- -	[105,000]
Total estimated obligations <u>a/</u>	32,768,869	30,026,964	-26,964	30,000,000
Unobligated balance brought forward	-16,795,833	-9,526,964	47,276,964	-2,250,000
Unobligated balance carried forward	9,526,964	2,250,000	-2,250,000	- -
Total appropriation or estimate	25,500,000	22,750,000	45,000,000	27,750,000

a/ Applied costs for 1959 are \$19,813,000. The difference of \$12,955,869 reflects, primarily, the lag in the installation of structural measures for which obligations were incurred in the 1959 and prior fiscal years. For the 1960 and 1961

fiscal years applied costs are estimated at \$29,715,581 and \$34,000,000 respectively. In 1960 it is estimated there will still be a slight lag in the installation of structural measures for which prior year obligations were incurred; however, because of a recent change in policy under which obligations for structural measures will not be incurred until the local organization is ready to award a construction contract, applied costs will exceed obligations in the 1961 fiscal year.

INCREASES AND DECREASES
(On basis of available funds)

A net decrease of \$26,964 for the watershed protection and flood prevention work as follows:

(1) A decrease of \$1,400,000 in the cost of project investigations and the development of watershed work plans.

Recent planning activities have been proceeding at a level which would result in the completion of project plans somewhat in excess of the number on which works of improvement can be initiated. Therefore a reduction in the rate of watershed work plan development is recommended in order to achieve a closer balance with the proposed schedule for initiating the installation of structural measures in about 32 new watersheds in 1961.

The following table shows the number of project applications received through June 30, 1959, and estimated for 1960 and 1961, the progress made and schedules for planning of projects authorized under Public Law 566, 83rd Congress:

Item	: 1955-58	: 1959	: (est.)	: 1960	: 1961	: Total
						: 1955-61
						: (est.)
Applications received	887	261	275	300		1,723
Watersheds approved for planning	364	82	100	70		616
Watersheds approved for operation	100	80	80	50		310
Watershed installation completed	(2)	(3)	(5)	(15)		(25)
Planning suspended or project not						
suitable for planning	371	11	18	25		425

As the rate of planning is reduced some positions vacated due to turnover of personnel would not be filled. Planning specialists and aides now engaged in watershed planning activities would be reassigned to the extent possible to installation of works of improvement and to other programs of the Service as vacancies arise or needs develop for such personnel in those activities.

(2) A decrease of \$2,750,000 in the Federal share of the cost of installing planned works of improvement in the pilot watersheds due to completion of work.

All scheduled work in 6 pilot watershed projects is expected to be completed in the current fiscal year. Only project evaluation and the preparation of

final reports remains to be completed for an additional 9 projects. This will reduce the number of pilot watersheds in which the Department is installing works of improvement to 15 for which funds will be required in 1961. Hence, a reduction in the amount of \$2,750,000 is proposed in 1961 in the level of operations to be carried on in the pilot watershed projects.

(3) A net increase of \$4,123,036 for installation of works of improvement in P. L. 566 watershed projects.

This net increase consists of an increase of \$5,000,000 to begin construction work on an estimated 32 additional watershed projects, and a decrease of \$876,964 in obligations for advance engineering and technical assistance and for construction on projects initiated prior to July 1, 1960.

It is estimated that \$5,000,000 will be used in 1961 to initiate the installation of structural works of improvement in about 32 additional watersheds during the 1961 fiscal year. Designs and specifications developed by the Federal Government would be furnished to local sponsoring organizations in watershed projects. These organizations would award the construction contracts for installation of planned structures. Technical assistance would continue to be furnished to guide the installation work and acceleration of land treatment.

At the close of the fiscal year 1960 there will be an estimated 250 P.L. 566 watershed projects in operation, of which 118 will be receiving advance engineering and technical assistance only, and about 132 will be in the construction stage. During 1961 it is estimated that 50 additional watershed projects will be authorized for advance engineering and technical assistance. This assistance is necessary in order to provide sponsoring local organizations with necessary designs and specifications for structural measures and with precise delineation of easement areas. The easement data is needed by the local people to enable them to secure necessary easements and rights-of-way which is a part of their contribution to the program of installing structural works of improvement. Funds available for projects on which construction work is initiated prior to July 1, 1960, including a proposed carryover of \$2,250,000 of prior year appropriations, will total \$16,900,000, a reduction of \$876,964 in the amount to be applied to these projects in 1960.

CHANGES IN LANGUAGE

The estimates include proposed changes in the language of this item as follows (new language underscored; deleted matter enclosed in brackets):

- For expenses necessary * * * in accordance with the Watershed Protection and Flood Prevention Act, approved August 4, 1954, as amended
- 1 (16 U.S.C. 1001 - [1007] 1008, and the provisions of the Act of
 - 2 April 27, 1935 (16 U.S.C. 590a - [590]f), * * * as amended by section 15
 - 3 of the Act of August 2, 1946 (5 U.S.C. 55a): Provided further, That annual accrued expenditures under this appropriation account, covering amounts becoming payable as a result of obligations incurred both in the current fiscal year and in prior fiscal years, shall not exceed \$37,400,000: Provided further, That this limitation shall not include annual accrued expenditures attributable to reimbursable work performed under this appropriation account.

The first change would add reference to section 1008 of title 16 of the United States Code in the appropriation language. This change is proposed in order to include reference to the amendment to the Watershed Protection and Flood Prevention Act approved August 12, 1958, Public Law 85-624 (72 Stat. 567). This amendment to the Act provides that the Secretary of the Interior shall be notified by the Department of the approval to assist local organizations in the preparation of plans for works of improvement. Under this amendment the Interior Department may, if it so desires, make surveys and investigations of the watershed areas and prepare reports to the Secretary of Agriculture concerning its recommendations for the conservation and development of wildlife resources and participate with this Department in the preparation of plans for works of improvement that are acceptable to the local organization.

The second change removes an unnecessary number in the language citation. It is merely editorial and would have no effect on the program.

The third change in language would provide for the establishment of an accrued expenditure limitation for this appropriation item pursuant to Public Law 85-759 (72 Stat. 852).

In carrying out the responsibilities under the Watershed Protection appropriation, four budget projects were established, as follows:

1. Investigations and planning
2. Installation of works of improvement
3. Loans and related expense
4. Surveys and investigations of water resources programs

The concepts under which accrued expenditures (goods and services received, or work "put in place") occur as contrasted to the incurrence of obligations (goods and services ordered, contracts awarded, or project agreements signed) under each of these projects, as well as other aspects of the accrued expenditure limitation, are discussed in the following paragraphs.

Administrative-type costs. In projects 1 and 4 "Investigations and planning" and "Surveys and investigations of water resources programs", obligations are incurred primarily for personal services and other operating expenses. Such obligations are virtually the same as accrued expenditures, except for minor differences due to goods and services ordered but not received as of the close of a particular accounting period.

Construction costs. In the project for "Installation of works of improvement", obligations differ substantially from accrued expenditures. In the "Pilot" watersheds, obligations for installing structural measures are incurred when a construction contract is let by the Service or in a few cases when a project agreement is entered into with the sponsoring local organization for installation of the works of improvement. Obligations are incurred in the "P. L. 566" watersheds when the project agreement is entered into with the local organization which is required by law to let and administer the contract for the installation of the watershed works of improvement.

Project agreements signed (obligations) for the installation of structural measures may not result in substantial "work in place" (accrued expenditures) for many months due to delay in award of contracts, default of contractors, the seasonal nature of construction work, unexpected bad weather, loss of or unavoidable delay in recruitment of key personnel, etc.

Loans. Under the project for "Loans and related expense", loans are made to local organizations through the Farmers Home Administration to help defray the local share of the cost of the watershed protection project. Generally it is necessary to approve a watershed protection loan for the entire needs of the applicant at one time. The approval of the loan constitutes an obligation. Therefore, obligational authority must be available in an amount sufficient for the entire loan at the time of loan approval. Expenditures accrue and will be charged against the proposed limitation as cash advances are made under the loan agreement.

Size of limitation. The limitation of \$37,400,000 proposed for the fiscal year 1961 includes \$34 million representing work expected to be performed in 1961, including construction work actually completed, regardless of when the obligations for that work were incurred. This amount represents an increase in the rate of installation of measures above that of prior years.

The limitation of \$37,400,000 has been estimated on the basis that:

- (a) Work performed during 1961 on projects under way for which obligations were incurred in 1960 and prior years will result in accrued expenditures of about \$18,500,000, and that work to be performed on projects initiated in fiscal year 1961 will result in accrued expenditures of about \$15,500,000, or a total of \$34 million for fiscal year 1961.

In previous fiscal years there has been a considerable lag in time between the signing of the project agreement which obligates funds and the letting of the construction contract for installation of works of

improvement. A change in procedure has recently been initiated to provide that a contract for the work must be advertised within 30 days and contracts signed within 90 days after the project agreement has been signed. It is expected that this will tend to shorten the time lag between the incurring of obligations and the accrual of expenditures. There were more than \$20 million in unliquidated obligations as of June 30, 1959, which will become accrued expenditures in the 1960 and subsequent fiscal years as work on the watershed projects is installed.

- (b) \$3,400,000, an amount equal to 10 percent of the above estimated accrued expenditure of \$34,000,000, is necessary to allow for the uncertainties in forecasting contractor's performance in completion of scheduled work in 1961. This margin is needed at least until more operating experience with the limitation has been gained, and it can be forecast more precisely what the annual accrued expenditure limitation requirements will be. There are only certain seasons of the year when much of the planned works of improvement on watersheds can be installed. Many factors beyond the control of the Federal Government or the local cooperating group can cause delay in installing measures, such as bad weather, loss of or unavoidable delay in recruiting personnel, delay in award of contracts, unavailability of materials, etc. Thus any work planned for installation near the end of a fiscal year which is delayed would necessarily have to be charged to the limitation for the succeeding year. This might result in an equivalent delay of other installation work planned for that year because of the necessity for staying within the limitation. Provision of the 10 percent safety factor requested in the 1961 accrued expenditure limitation will help avoid unnecessary delay of planned work.

Current Activities: The Watershed Protection and Flood Prevention Act (Public Law 566, 83rd Congress), as amended (16 U.S.C. 1001-1008), provides for cooperation between the Federal Government and the States and their political subdivisions in a program to prevent erosion, floodwater, and sediment damages in the watersheds of rivers and streams and to further the conservation, development, utilization, and disposal of water. The work of the Department under this item consists of the following:

1. Investigations and surveys of proposed small watershed projects upon application by local sponsoring organizations and collaboration with them in the preparation of project work plans. These plans outline the proposed works of improvement to be installed and include the estimated costs, a cost-benefit analysis, cost-sharing and maintenance arrangements, a proposed schedule of operations, and other facts needed to determine whether Federal participation in the cooperative project should be approved.
2. Participation in the installation of works of improvement in approved watershed projects. Detailed construction plans and specifications are prepared for specific flood prevention and water management features of the project. The Federal Government bears all of the construction cost of the flood prevention and related features except easements and rights-of-way, water rights, and administration of contracts, and pays for an equitable part of the cost of installation of the agricultural water management and fish and wildlife development features. Local organizations must pay all costs of works of improvement for purposes other than these. Funds are provided to local organizations for the Federal share of the cost of contracts they award for installation of authorized works of improvement on other than Federal lands. The Federal agencies do this work on Federal lands which they administer with appropriate contributions being made by the local people who receive benefits. Engineering assistance is provided for flood prevention, fish and wildlife, and agricultural water management construction work, either directly by the Federal Government or by advancement of funds to local organizations for employment of engineers. Technical assistance is provided to accelerate the planning and application of land treatment measures in the watersheds to prevent erosion and protect the structural works of improvement from flood and sediment damage. Financial assistance at the same rate as provided under other programs of the Department is also provided for land treatment measures installed primarily for flood prevention.
3. Installation on a cost-sharing basis, of improvement measures on 30 currently active pilot watersheds which were initially authorized by the Congress to serve as demonstrations of the effectiveness of complete watershed treatment in preventing erosion and reducing floodwater and sediment damage.

4. Program evaluation studies in selected watershed protection projects to determine the effectiveness of structural and land treatment measures installed.
5. Surveys and investigations of the watersheds of rivers and other waterways in cooperation with other Federal, State and local agencies, as the basis for the development of coordinated inter-agency water resources programs.
6. The making of loans to local organizations to finance the local share of the costs of carrying out works of improvement for flood prevention and for the conservation, development, utilization, and disposal of water.

Program Assignments

The Soil Conservation Service has general responsibility for administration of the work of the Department authorized under the Watershed Protection and Flood Prevention Act and for the formulation of guiding principles and procedures. It assists local organizations with (a) the development of watershed work plans, and (b) the application of land treatment measures and the installation of structural works of improvement on non-Federal land in authorized watersheds. Some works are also installed on Federal lands by arrangement with the administering agency. It also makes surveys and investigations of the watersheds of rivers and waterways and cooperates with other agencies in the planning, development, and coordination of works and programs.

The Forest Service participates in the development of watershed work plans and in the installation of watershed improvement measures. It concerns itself with (a) all national forest and other lands in the authorized watersheds that are administered by the Forest Service, and (b) certain specialized technical assistance on other forest lands in the watersheds. It also provides specialized assistance in forestry aspects of coordinated river basin programs.

The Bureau of Land Management and the Bureau of Indian Affairs of the Department of the Interior participate in the planning and installation of works of improvement on lands under their jurisdiction. The Agricultural Research Service assists with the development of criteria to be used in the economic evaluation of work plans and measures installed in small watershed projects. It also makes special economic analyses of specific watershed projects and of river basin resource development proposals. The Farmers Home Administration has responsibility for administration of Section 8 of the Act relating to loans to local organizations.

Funds are made available from this appropriation to the U. S. Weather Bureau and the U. S. Geological Survey, either by transfer or reimbursement, for precipitation and runoff data needed in watershed program evaluation, planning, and design work.

Selected Examples of Recent Progress:

INVESTIGATIONS AND PLANNING

Agency Participation

Allocations of funds to the cooperating agencies for 1959 and 1960 and proposed for 1961 for investigations and planning watershed protection projects are as follows:

Agency	1959 Obligations	1960 Estimate	1961 Estimate
Soil Conservation Service	\$4,278,935 ^{1/}	\$4,502,400	\$3,237,200
Forest Service	341,685	365,000	236,800
Agricultural Research Service	29,651	24,600	20,000
U. S. Geological Survey	13,339	8,000	6,000
Total	4,663,610	4,900,000	3,500,000

^{1/} Includes approximately \$30,000 for reimbursable work performed by the U. S. Weather Bureau.

Development of Watershed Work Plans

As of November 1, 1959, watershed planning assistance had been authorized to be given in 47 States and in Puerto Rico. No applications for watershed planning assistance have been received from Alaska, Maine, or Rhode Island.

During the 1959 fiscal year 261 new applications for watershed project assistance were received by the Soil Conservation Service from local sponsors. A total of 1,148 applications had been received as of June 30, 1959. These applications covered 82,610,300 acres of watershed lands in 47 States and Puerto Rico. The Administrator, SCS, approved 82 additional applications for work plan development during the 1959 fiscal year. As of June 30, 1959, a total of 446 applications covering 32,013,300 acres of watershed lands had been approved for work plan development. A total of 246 watershed work plans had been developed by the end of the fiscal year 1959.

No watershed planning action had been taken by June 30, 1959, on 702 of the applications for assistance received from local organizations. It is estimated that only about 387 of the watersheds covered by these applications will be determined as suitable for the development of plans under Public Law 566 and that 315 will not qualify for assistance. It is not possible to provide watershed planning assistance immediately to all local organizations submitting applications. The local people in Arkansas, California, Connecticut, Kentucky, Louisiana, Oklahoma, Oregon, Texas, and Virginia furnished funds and technical services estimated to amount to \$1,374,466 through the fiscal year 1959 to

supplement the watershed planning being done by the Department under this item. It is estimated that these same States together with initial contributions from Colorado, Iowa, Nebraska, Tennessee, and Utah will provide watershed planning assistance amounting to more than \$1,040,000 in the fiscal year 1960. No commitments are made that Federal allotments of funds for the installation of works of improvement will be increased in these States because of the additional watershed work plans prepared with the non-Federal funds and services which they provide.

The following table shows the status as of June 30, 1959, of watersheds with respect to project applications, planning, and operations under authority of Public Law 566, and estimates for 1960 and 1961:

Activity	Fiscal Year					
	1956	1957	1958	1959	1960	1961
APPLICATIONS						
Received - Current year	194	165	175	261	275	300
Received - Cumulative at end of year ...	547	712	887	1,148	1,423	1,723
Not suitable for planning - Cumulative at end of year	260	280	300	315	330	345
PLANNING						
Authorized - Current year	172	96	96	82	100	70
Authorized - Cumulative	172	268	364	446	546	616
Suspended or Terminated - Cumulative ...	(10)	(39)	(71)	(67)	(70)	(80)
Planning in process at end of year	149	187	193	199	196	140
Remaining to be planned at end of year .	115	164	223	387	547	762
OPERATIONS						
Authorized - Current year	13	29	58	80	80	50
Authorized - Cumulative	13	42	100	180	260	310
Completed - Current year	--	--	2	3	5	15
Completed - Cumulative	--	--	2	5	10	25
In process at end of year	--	--	98	175	250	285

Fish and Wildlife Improvements Included in
Watershed Work Plans

The Watershed Protection and Flood Prevention Act, as amended by Public Law 85-624 and Public Law 85-865, provides for giving consideration to the conservation and development of wildlife resources in watershed projects. Where determined feasible as a part of the conservation, development, utilization, and disposal of water in a watershed project, the Secretary of Agriculture may provide in the approved watershed work plan for cost-sharing assistance to be furnished to local organizations for fish and wildlife development. Policies and procedures for carrying out the provisions of the amendments to Public Law 566 cited above have been formulated and placed in effect. Provision is made for the fullest cooperation with the Fish and Wildlife Service and State fish and

game agencies. Most of the benefits derived from fish and wildlife development stem primarily from the enjoyment of sport fishing and hunting. There are no wholly satisfactory criteria for translating such benefits into monetary values. It has been recognized in many previous legislative enactments, however, that such benefits justify participation by both State and Federal governments in improvements to enhance the opportunities for harvesting fish and wildlife in the "pursuit of happiness." Because of the long history of Federal and State participation in such developments, the Secretary has determined that where State and local organizations contribute at least 50 percent of the installation cost of such developments, as part of a watershed project, the benefits shall be considered, for the purpose of project justification, to equal the costs thereof.

Fish and game agencies are showing considerable interest in this phase of watershed project development and are indicating their intention to finance the local share of the costs for fish and wildlife development. It is anticipated that this interest will result in a significant number of watershed projects with fish and wildlife features as an integral part of the watershed plan. It is also anticipated that a number of requests will be received to modify plans already approved to incorporate these features.

Improved Procedures Lessen Cost of Hydrologic Computations

A program with appropriate operating instructions for use of electronic digital computers for calculating water-surface profiles in natural and constructed channels has been developed by Soil Conservation Service engineers and made available to all Service operating units and also to private computing and engineering firms. This procedure is used for developing information on water-stage relationships which is needed for project evaluation purposes. It is also used later in the design of flood channels and flood control structures. Savings in total engineering time required for such work amount to about one-third over methods previously in use. Field surveys of channel cross-sections and the plotting of these take an average of about 60 percent of the cost required for the total job of computing water surface profiles where the computing of channel parameters and the water surface profile is done by the best available manual methods. Thus, under these conditions, about 40 percent of the total cost is actually spent on calculation. Use of the electronic computer reduces the computation costs to about one-sixth of the manual costs. Thus, the total job is reduced in cost by about one-third. The computer program is now being further developed to automatically include the effects of culverts and bridges on the water-surface profiles which will further improve efficiency of operations.

INSTALLATION OF WORKS OF IMPROVEMENT

Agency Participation

Allocation of funds to the cooperating agencies of the Department of Agriculture and the Department of Interior for 1959 and 1960 and proposed for 1961 for works of improvement on Watershed Protection projects are as follows:

Agency	1959 Obligations	1960 Estimate	1961 Estimate
Soil Conservation Service			
Pilot Watersheds	\$5,464,095	\$5,164,800	\$2,446,800
P. L. 566 Watersheds <u>1/</u>	20,878,064	16,986,336	21,050,100
Forest Service			
Pilot Watersheds	75,577	47,000	13,200
P. L. 566 Watersheds	224,425	625,000	725,000
Agricultural Research Service			
Pilot Watersheds	38,395	38,200	40,000
P. L. 566 Watersheds	27,173	51,415	51,000
Bureau of Land Management			
P. L. 566 Watersheds	8,311	35,175	2,800
Bureau of Indian Affairs			
P. L. 566 Watersheds	6,492	11,307	9,100
U. S. Geological Survey			
P. L. 566 Watersheds	69,251	67,731	62,000
Total	26,791,783	23,026,964	24,400,000

1/ Includes approximately \$50,000 in 1959 and \$80,000 in 1960 and 1961 for reimbursable work performed by the U. S. Weather Bureau.

Status of Pilot Demonstration Watersheds

The following table shows the status of the active pilot watersheds which were initiated in 1954 to demonstrate and evaluate the effects of works of improvement installed in small watersheds for watershed protection and flood prevention:

[Dollars in thousands]

<u>Explanation</u>	<u>1959 actual</u>		<u>1960 estimate</u>		<u>1961 estimate</u>	
	<u>Num- ber</u>	<u>Amount</u>	<u>Num- ber</u>	<u>Amount</u>	<u>Num- ber</u>	<u>Amount</u>
Active projects at beginning of year and estimated completion cost	39	\$15,224	30	\$9,646	15	\$4,396
Deduct amounts obligated during the year for:						
(a) Projects completed during the year	9	96	15	1,665	11	1,387
(b) Other projects	--	5,482	--	3,585	--	1,113
Subtotal	9	5,578	15	5,250	11	2,500
Total, projects in progress at end of year and estimated completion cost	30	9,646	15	4,396	4	1,896

Originally 62 pilot watershed projects were started in the fiscal year 1954 in cooperation with local sponsors. Seven of these were subsequently deauthorized and another discontinued at the sponsor's request prior to June 30, 1958. This left 54 projects to be completed. The installation of works of improvement was completed on the White Tanks project in Arizona in the fiscal year 1955 and on an additional 14 projects in the fiscal year 1958. Seven other projects were scheduled for completion in 1958 and were reported in error last year as completed as of June 30, 1958. However, mainly due to drought or excess moisture conditions, it was necessary to continue the installation of land treatment and some structural measures on 6 of these projects into the fiscal year 1959 and into the fiscal year 1960 on the other project.

One of these is the North Fork of Rough River Watershed in Kentucky which was previously reported to have been completed on June 30, 1958. However, it was necessary to continue operations on this watershed in the fiscal years 1959 and 1960 to complete a floodwater retarding dam on which construction was begun in the fall of 1957. Due to excess moisture the contractor was unable to complete the work in the fiscal year 1958 as scheduled. It is estimated that project installations will be completed on 15 pilot watersheds in the 1960 fiscal year.

The installation of works of improvement was completed in 9 of the pilot watersheds during the fiscal year 1959, as follows:

Double Creek, Oklahoma *	Old Tom Creek, Illinois *
East Fork of Falling River, Va. *	Plum Creek, Kentucky *
East Willow Creek, Minnesota	Salem Fork of Ten Mile Creek, W. Va.
Floyd River Tribs, Iowa	Upper Green River, Kentucky *
Green Creek, Texas *	

*Previously reported in error as completed in fiscal year 1958.

An additional 11 pilot watersheds are scheduled to be completed in 1961. This would leave only 4 pilot watersheds remaining to be completed after the end of the fiscal year 1961. The Walnut Creek and Calleguas Creek projects in California are presently scheduled for completion in the fiscal year 1966. Unavailability of tax revenues to the sponsoring local organizations has held up completion of work on these two projects. Due to changes in the work schedules desired by the local people it has been necessary to reschedule completion of the Twelve Mile Creek project in South Carolina, and Switzler Creek project in Kansas to the fiscal year 1963.

Evaluation Studies on Pilot Watersheds

As of June 30, 1959, some project evaluation studies had been carried out in all of the pilot watershed projects except the seven which had been deauthorized. These studies were terminated in 18 projects in or prior to the fiscal year 1959 and are estimated to be completed in 24 additional projects by the end of the fiscal year 1961. It is planned to extend the period of the evaluation studies in approximately 13 pilot projects through the fiscal year 1965. These projects are:

Brownell Creek, Nebraska
Double Creek, Oklahoma
Escondido Creek, Texas
Kiowa Creek, Iowa
Mule Creek, Iowa
North Fork of Broad River, Georgia
Plum Creek, Kentucky

Salem Fork of Ten Mile Creek, W. Va.
Six Mile Creek, Arkansas
Third Creek, North Carolina
Twelve Mile Creek, South Carolina
Upper Hocking River, Ohio
Upper Hondo Tribs., New Mexico

The information already obtained from the evaluation studies of the pilot projects has been very useful in planning other watershed projects and in the preparation of detailed designs for structural measures. The extension of the evaluation studies in about 13 projects will greatly increase the amount of useful information available for planning and designing future watershed projects.

Status of Public Law 566 Watersheds

After local sponsoring organizations have developed watershed work plans with the Department's assistance and the projects have been approved as suitable for Federal participation, technical services and cost-sharing assistance are provided for specified works of improvement. The initiation of installation of works of improvement in new projects requires administrative approval in two stages: (1) approval for advance engineering and other technical assistance only, and (2) approval for construction of structural measures. The advance engineering and technical assistance stage includes surveys, investigations, and preparation of detailed designs, specifications, and engineering cost estimates for construction of structural works, as well as technical and other assistance for planning and applying land treatment measures. The project-construction stage begins with the execution of the first project agreement for construction of works of improvement, which obligates the Government to furnish its share of the construction cost.

During the fiscal year 1959, 80 projects were approved for advanced engineering and other technical assistance and 60 projects were approved for construction of structural measures. This brought the total projects approved for Federal assistance in the installation of works of improvement to 180 as of June 30, 1959. Of this number, 107 had been approved for construction of structural measures. Since project installations were completed in the fiscal year 1958 in two projects and in three more projects in the fiscal year 1959, this left a total of 175 projects in progress with 102 of these in the construction stage as of June 30, 1959.

The following table shows the status of Public Law 566 projects with respect to approvals for advance technical assistance and construction:

[Dollars in thousands]

<u>Explanation</u>	<u>1959 actual</u>		<u>1960 estimate</u>		<u>1961 estimate</u>	
	<u>Num- ber</u>	<u>Amount</u>	<u>Num- ber</u>	<u>Amount</u>	<u>Num- ber</u>	<u>Amount</u>
<u>Projects approved for advance engi-</u>						
<u>neering and technical assistance</u>						
(number and estimated cost of com-						
pletion, unless otherwise indicated):						
Projects underway at beginning						
of year	53	\$29,925	73	\$50,840	118	\$92,940
Projects initiated during the						
year	80	71,572	80	78,000	50	50,000
Subtotal	133	101,497	153	128,840	168	142,940
Deduct projects approved for con-						
struction during the year	60	47,977	35	30,900	32	28,900
Net projects approved	73	53,520	118	97,940	136	114,040
Deduct amounts obligated during						
the year for advance engineering						
and technical assistance	--	2,680	--	5,000	--	5,635
Total, projects receiving						
only advance engineering						
and technical assistance						
at end of year	73	50,840	118	92,940	136	108,405
<u>Projects approved for construction</u>						
(number and estimated cost of						
completion, unless otherwise						
indicated):						
Projects underway at beginning						
of year	45	12,906	102	42,349	132	60,472
Projects initiated during the						
year	60	47,977	35	30,900	32	28,900
Total, projects under con-						
struction during the year ..	105	60,883	137	73,249	164	89,372
Deduct amounts obligated during						
the year for works of improve-						
ment on:						
(a) Projects approved for con-						
struction during the						
year	--	12,429	--	5,300	--	5,000
(b) Projects completed during						
the year	3	73	5	62	15	450
(c) Continuing prior year						
projects	--	6,032	--	7,415	--	10,815
Total, projects under						
construction at end						
of year	102	42,349	132	60,472	149	73,107
Grand total: Projects						
in progress at end						
of year	175	93,189	250	153,412	285	181,512
Projects completed (cumulative)	(5)	--	(10)	--	(25)	--

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Watershed Costs and Completion Schedule

The following table shows by State and watershed name descriptive information concerning each Pilot and Public Law 566 Watershed approved for installation of a program of works of improvement by June 30 1959.

State and Watershed	: Total : Watershed : Area : (Acres)	: Total : Estimated : Federal : Cost	: %Fed. : Cost to : Total : Cost	: Total Cumu- : lative Fed : Obligations : 6/30/59	: %Fed : Cost : as of : 6/30/59	: Sched : Year : Com- : pletion
<u>ALABAMA</u>	:	:	:	:	:	:
Brackin's Mill Creek	: 3,400	: \$222,284	: 71.3	: \$204,067	: 91.8	: 1963
Bristow's Creek	: 16,608	: 173,367	: 37.3	: 459	: 0.3	: 1963
Clear Creek	: 11,800	: 80,666	: 73.7	: 80,666	: 100.0	: 1959-C
High Pine Creek	: 51,590	: 482,836	: 48.2	: 206,530	: 42.8	: 1963
Little New River	: 32,506	: 179,156	: 45.5	: 140,923	: 78.7	: 1962
Little Paint Creek	: 35,600	: 448,754	: 66.5	: 1,223	: 0.3	: 1964
Pine Darren Creek	:(See Interstate projects below)					:
<u>ARIZONA</u>	:	:	:	:	:	:
Frye Creek-Stockton Wash.	: 153,714	: 4,462,602	: 90.2	: --	: 0.0	: 1964
Squaw Peak-South Mountain (Pilot) 1/	: --	: --	: --	: --	: --	: --
White Tanks (Pilot)	: 178,560	: 213,507	: 49.5	: 213,507	: 100.0	: 1955-C
<u>ARKANSAS</u>	:	:	:	:	:	:
Camp Bayou	: 21,756	: 118,525	: 44.1	: 32,945	: 27.8	: 1963
Caney Creek	: 39,680	: 764,649	: 67.5	: 302,535	: 39.6	: 1962
Ouachita Creek	: 4,250	: 96,373	: 75.6	: 7,515	: 7.8	: 1963
Randolph-Walnut Lake	: 13,564	: 92,650	: 30.8	: --	: 0.0	: 1964
Six Mile Creek (Pilot)	: 168,320	: 2,330,000	: 67.5	: 2,124,207	: 91.2	: 1960
<u>CALIFORNIA</u>	:	:	:	:	:	:
Adobe Creek (Pilot) 2/	: 21,440	: 50,740	: --	: 50,740	: --	: 1955
Adobe Creek	: 21,500	: 750,641	: 78.9	: 50,369	: 6.7	: 1966
Arroyo Grande Creek	: 103,400	: 549,643	: 56.6	: 482,403	: 87.8	: 1962
Buena Vista Creek	: 8,970	: 978,800	: 57.6	: 65,820	: 6.7	: 1963
Calleguas Creek (Pilot)	: 208,000	: 3,770,000	: 45.4	: 1,786,630	: 47.4	: 1966
Central Sonoma	: 50,000	: 9,599,500	: 82.2	: 1,369,901	: 14.3	: 1965
Walnut Creek (Pilot)	: 95,600	: 4,542,000	: 56.0	: 2,540,997	: 55.9	: 1966
<u>COLORADO</u>	:	:	:	:	:	:
Big Sandy Creek	: 219,000	: 798,647	: 65.4	: 251,569	: 31.5	: 1963
Kiowa Creek (Pilot)	: 106,880	: 922,000	: 69.2	: 803,267	: 87.1	: 1960
West Cherry Creek	: 31,360	: 320,336	: 69.3	: 96,247	: 30.0	: 1963
Wray Watershed	: 2,386	: 185,830	: 90.0	: 164,057	: 88.3	: 1961
<u>CONNECTICUT</u>	:	:	:	:	:	:
Furnace Brook-Middle River	:(See Interstate projects below)					:
Roaring Brook-Walnut St. Brook	: 5,070	: 41,204	: 77.1	: 38,316	: 93.0	: 1961

State and Watershed	Total Watershed Area (Acres)	Total Estimated Federal Cost	% Fed. Cost to Total Cost	Total Cumu- lative Fed. Obligations 6/30/59	% Fed. Cost as of 6/30/59	Sched. Year Com- pletion
DELAWARE						
Bear Hole	4,523	174,748	46.4	119,624	68.5	1961
Upper Nanticoke River ..	119,775	2,339,304	48.6	66,662	2.9	1968
FLORIDA						
Fisheating Creek Marsh ..	51,200	276,925	53.9	248,710	89.8	1961
Lake Placid East						
Chain of Lakes	12,500	80,176	86.0	78,093	97.4	1960
North St. Lucie River						
Drainage District ...	60,220	348,420	25.9	23,008	6.6	1963
Pine Barren Creek	(See Interstate projects below)					
Sebastian River -						
Drainage District ...	33,930	342,740	37.5	443	0.1	1964
GEORGIA						
Barber Creek	26,899	293,225	46.4	184,493	62.9	1963
Bear Creek	23,324	180,574	37.0	177,809	98.5	1960
Head of Little						
Tennessee River	(See Interstate projects below)					
Hightower Creek	22,950	259,255	69.9	75,687	29.2	1963
Little Tallapoosa River.	62,516	1,080,860	63.8	297,616	27.5	1964
Mill Creek	32,604	412,996	61.3	201,422	48.8	1963
North Fork at						
Broad River (Pilot) ..	40,598	975,000	66.8	926,698	95.0	1960
Rocky Creek	20,700	67,719	31.7	67,719	100.0	1959-C
Rooty Creek	29,483	268,549	67.0	247,935	92.3	1962
Sautee Creek	20,000	251,086	61.3	211,737	84.3	1962
Tobesofkee Creek	137,029	460,929	34.9	--	0.0	1964
IDAHO						
Cow Creek-Dobson Creek ..	17,700	166,750	89.6	5,407	3.2	1961
Dry Creek (Pilot) 2/...	44,800	101,759	80.5	101,759	100.0	1957
Fourth of July Creek ..	17,100	210,239	89.9	175,640	84.0	1963
ILLINOIS						
Big Blue Watershed	26,690	135,230	22.3	--	0.0	1963
Hadley Creek (Pilot) ..	46,272	1,180,000	89.1	991,270	84.0	1961
Hambaugh Martin						
Watershed	8,601	180,489	72.8	72,932	40.4	1961
Money Creek (Pilot) 2/...	42,800	32,021	54.9	32,021	--	1958
Old Tom Creek (Pilot) ..	11,520	220,314	81.6	220,314	100.0	1959-C
Shoal Creek	192,365	1,512,109	32.4	--	0.0	1965
Tiskilwa Area	3,300	517,184	93.7	484,059	93.6	1961

State and Watershed	: Total : : Watershed : : Area : : (Acres)	: Total : : Estimated : : Federal : : Cost	: % Fed. : : Cost to : : Total : : Cost	: Total Cumulative : : Fed. : : Oblig. : : 6/30/59	: % Fed. : : Cost : : as of : : 6/30/59	: Sched. : : Year : : Com- : : pletion
<u>INDIANA</u>	:	:	:	:	:	:
Busseron Watershed	153,280	2,083,990	62.6	28,156	1.4	1966
Elk Creek	18,020	295,784	61.6	107,545	36.4	1962
Flat Creek (Pilot)	36,634	161,943	55.5	161,943	100.0	1958-C
Prairie Creek	88,690	1,269,690	53.7	422,702	33.3	1964
<u>IOWA</u>	:	:	:	:	:	:
Big Park Watershed	7,674	422,364	83.4	2,805	0.7	1964
Crooked Creek	22,656	439,874	65.1	61,946	14.1	1963
Floyd River	:	:	:	:	:	:
Tributaries (Pilot)	15,776	24,176	8.5	24,176	100.0	1959-C
Harmony Creek	3,100	156,000	83.3	155,050	99.4	1959-C
Honey Creek (Pilot)	9,120	244,000	50.3	239,124	98.0	1958-C
Mule Creek (Pilot)	8,000	489,000	66.7	479,059	98.0	1958-C
Rocky Branch Creek	8,663	265,907	88.3	94,094	35.4	1963
Simpson Creek	2,393	136,893	88.7	119,092	87.0	1961
<u>KANSAS</u>	:	:	:	:	:	:
Aiken Creek (Pilot)	6,726	115,641	70.0	115,641	100.0	1958-C
Bill's Creek (Pilot) 2/..	16,000	20,972	--	20,972	--	1954
Cimarron Watershed	6,440	126,158	85.5	60,103	47.6	1961
Little Delaware	:	:	:	:	:	:
Mission Creek (Pilot)...	28,160	601,000	70.3	600,710	100.0	1960
Lost Creek (Pilot)	12,800	201,000	39.2	134,787	67.1	1960
Snipe Creek (Pilot)	16,640	143,937	51.7	143,937	100.0	1958-C
Switzler Creek (Pilot) ...	21,120	383,000	64.4	194,658	50.8	1963
Thompsonville Watershed ..	4,062	110,428	93.5	10,407	9.4	1961
Walnut Creek	(See Interstate projects below)					
<u>KENTUCKY</u>	:	:	:	:	:	:
Canoe Creek	76,643	562,920	28.7	52,565	9.3	1963
Cypress Creek	32,424	225,407	26.2	199,156	88.4	1962
Donaldson Creek	47,010	1,193,149	61.5	803	0.1	1963
Meadow Creek	9,862	203,398	41.0	11,959	5.9	1964
Mud River	240,033	1,737,748	33.8	769,186	44.3	1963
North Fork of	:	:	:	:	:	:
Rough River (Pilot).....	24,960	388,000	54.2	383,320	98.8	1960
Obion Creek	206,108	1,931,187	32.7	152,047	7.9	1964
Plum Creek (Pilot)	22,560	663,000	56.1	627,285	94.6	1959-C
Red River (Pilot)	60,000	371,000	58.7	352,844	95.1	1958-C
Twin Creek	17,418	80,047	26.8	55,622	69.5	1961
Upper Green	:	:	:	:	:	:
River (Pilot)	24,998	383,879	68.3	383,879	100.0	1959-C

State and Watershed	: Total : : Watershed : : Area : : (Acres) :	: Total : : Estimated : : Federal : : Cost :	: % Fed. : : Cost to : : Total : : Cost :	: Total Cum- : : lative Fed. : : Obligations : : 6/30/59 :	: % Fed. : : Cost : : as of : : 6/30/59 :	: Sched. : : Year : : Com- : : pletion :
<u>LOUISIANA</u>	:	:	:	:	:	:
Baker Canal	: 21,500 :	: 42,697 :	: 32.7 :	: 38,629 :	: 90.5 :	: 1960 :
Bayou Dupont	: 57,610 :	: 1,521,464 :	: 68.9 :	: 900,152 :	: 59.2 :	: 1962 :
Bear Creek	: 13,550 :	: 233,718 :	: 54.0 :	: 169,174 :	: 72.4 :	: 1962 :
Pleasant Valley, Big Ditch, and Scarboroughs Creek	: 11,800 :	: 312,410 :	: 59.1 :	: 5,208 :	: 1.7 :	: 1963 :
Upper Bayou Nezpique	: 214,157 :	: 662,861 :	: 28.6 :	: 82,021 :	: 12.4 :	: 1963 :
Upper West Fork Cypress Bayou	: 5,550 :	: 333,418 :	: 65.9 :	: 306,266 :	: 91.9 :	: 1963 :
<u>MARYLAND</u>	:	:	:	:	:	:
Little Deer Creek	: 10,112 :	: 220,155 :	: 73.8 :	: 80,252 :	: 36.5 :	: 1962 :
Little Youghiogheny River .	: 26,275 :	: 362,971 :	: 58.1 :	: 39,183 :	: 10.8 :	: 1962 :
Timmonstown Branch	: 8,655 :	: 182,108 :	: 50.1 :	: 177,144 :	: 97.3 :	: 1962 :
<u>MASSACHUSETTS</u>	:	:	:	:	:	:
Baiting Brook	: 2,182 :	: 33,026 :	: 71.2 :	: 7,736 :	: 23.4 :	: 1962 :
Furnace Brook-Middle River.	: (See Interstate projects below) :			:	:	:
<u>MICHIGAN</u>	:	:	:	:	:	:
Little Black River	: 17,130 :	: 196,210 :	: 88.3 :	: 24,927 :	: 12.7 :	: 1963 :
<u>MINNESOTA</u>	:	:	:	:	:	:
Chippewa River Tribs. and Hawk Creek (Pilot)	: 60,800 :	: 2,171,000 :	: 52.4 :	: 847,125 :	: 39.0 :	: 1961 :
Coon Creek	: 55,276 :	: 225,685 :	: 20.4 :	: 13,337 :	: 5.9 :	: 1964 :
East Willow Creek (Pilot) ..	: 24,000 :	: 279,000 :	: 67.2 :	: 259,803 :	: 93.1 :	: 1959C :
Rush Pine Creek	: 88,050 :	: 65,114 :	: 23.4 :	: 32,500 :	: 49.9 :	: 1961 :
South and North Fork of the Crow (Pilot) 1/	: -- :	: -- :	: -- :	: -- :	: -- :	: -- :
<u>MISSISSIPPI</u>	:	:	:	:	:	:
Ellison Creek	: 19,150 :	: 427,768 :	: 69.8 :	: 68,502 :	: 16.0 :	: 1962 :
Grays Creek	: 23,638 :	: 649,163 :	: 57.0 :	: 11,180 :	: 1.7 :	: 1965 :
Indian Creek	: (See Interstate projects below) :			:	:	:
Muddy Creek	: (See Interstate projects below) :			:	:	:
Tackett Creek	: 8,850 :	: 214,216 :	: 60.4 :	: 38,475 :	: 18.0 :	: 1961 :
West Hatchie	: 47,874 :	: 922,239 :	: 62.4 :	: 5,674 :	: 0.6 :	: 1964 :
<u>MISSOURI</u>	:	:	:	:	:	:
East Branch of the South Fork of the Black Water River (Pilot)	: 12,800 :	: 449,000 :	: 69.6 :	: 415,526 :	: 92.5 :	: 1960 :
East Fork of Big Creek	: 52,084 :	: 332,162 :	: 59.8 :	: 13,891 :	: 4.2 :	: 1964 :
Lost Creek (Pilot)	: 8,960 :	: 441,913 :	: 86.2 :	: 361,846 :	: 81.9 :	: 1961 :
Platt River Tribs	: 12,800 :	: 225,756 :	: 64.0 :	: 21,397 :	: 9.5 :	: 1964 :

State and Watershed	: Total : : Watershed : : Area : : (Acres) :	: Total : : Estimated : : Federal : : Cost :	: % Fed. : : Cost to : : Total : : Cost :	: Total Cumu- : : lative Fed. : : Obligations : : 6/30/59 :	: % Fed. : : Cost : : as of : : 6/30/59 :	: Sched. : : Year : : Com- : : pletion :
<u>MONTANA</u>						
Lower Willow Creek	: 71,200 :	292,100:	38.6 :	38,509 :	13.2 :	1963
Muster Creek (Pilot) 2/ ...	: 32,000 :	8,622:	-- :	8,622 :	-- :	1955
	: :	:	:	:	:	:
<u>NEBRASKA</u>						
Antelope Creek	: 107,072 :	402,272:	30.1 :	9,414 :	2.3 :	1966
Brownell Creek (Pilot)	: 15,360 :	623,000:	66.2 :	523,807 :	84.1 :	1960
Dry Creek (Pilot)	: 31,360 :	368,000:	76.0 :	352,035 :	95.7 :	1960
Indian Creek (Pilot)	: 51,200 :	887,000:	50.8 :	730,567 :	82.4 :	1961
Mud Creek	: 38,872 :	1,020,438:	50.4 :	21,030 :	2.1 :	1966
Oak Middle Creek Tribs	: 230,699 :	966,600:	38.1 :	185,480 :	19.2 :	1964
Plattsmouth Area	: 2,465 :	143,190:	73.3 :	79,091 :	55.2 :	1961
Upper Salt-	: :	:	:	:	:	:
Swedeburg (Pilot)	: 114,516 :	1,518,000:	62.7 :	1,119,345 :	73.7 :	1961
Walnut Creek	:(See Interstate Projects below)					:
Wildhorse Watershed	: 26,000 :	382,255:	42.9 :	137,682 :	36.0 :	1966
	: :	:	:	:	:	:
<u>NEVADA</u>						
Peavine Mountain	: 6,300 :	950,890:	78.8 :	650,789 :	68.4 :	1962
	: :	:	:	:	:	:
<u>NEW HAMPSHIRE</u>						
Baboosic Brook (Pilot)	: 30,528 :	52,517:	51.5 :	52,517 :	100.0 :	1958-C
Ash Swamp, Tannery,	: :	:	:	:	:	:
White and Black Brooks ..	: 12,800 :	134,649:	47.1 :	18,746 :	13.9 :	1965
	: :	:	:	:	:	:
<u>NEW JERSEY</u>						
Paulins Kill	: 109,440 :	347,055:	52.0 :	90,740 :	26.1 :	1963
Pequest (Pilot)	: 69,120 :	828,000:	73.0 :	804,218 :	97.1 :	1960
Silver Lake -	: :	:	:	:	:	:
Locust Island	: 5,590 :	208,857:	76.6 :	136,762 :	65.5 :	1962
Stony Brook	: 30,604 :	353,110:	59.8 :	177,245 :	50.2 :	1966
Town Bank	: 2,400 :	110,144:	51.0 :	41,886 :	38.0 :	1964
	: :	:	:	:	:	:
<u>NEW MEXICO</u>						
Caballo Arroyos	: 7,680 :	292,043:	97.9 :	147,338 :	50.5 :	1961
Dona Ana Arroyo	: 6,950 :	179,829:	89.6 :	179,829 :	100.0 :	1958-C
Hatch Valley Arroyos	: 14,521 :	311,407:	97.6 :	311,407 :	100.0 :	1958-C
Pecos Arroyo	: 47,808 :	118,855:	83.7 :	975 :	0.8 :	1965
Prop Canyon and Tribs	: 19,162 :	227,203:	89.1 :	27,848 :	12.3 :	1963
Salt peter Creek	: 32,320 :	145,324:	75.1 :	2,512 :	1.7 :	1964
Sandia Mt. Tribs.	: :	:	:	:	:	:
(Pilot)	: 48,000 :	150,000:	80.6 :	144,819 :	96.5 :	1958-C
Tramperos Creek	: 136,320 :	310,057:	67.5 :	20,444 :	6.6 :	1963
Upper Rio Hondo (Pilot)....	: 192,000 :	781,000:	67.8 :	631,795 :	80.9 :	1961
Upper Rio Penasco	: 128,000 :	351,925:	91.9 :	243,225 :	69.1 :	1962
Zuber Draw	: 115,840 :	437,583:	73.4 :	132,651 :	30.3 :	1963

State and Watershed	: Total Watershed Area (Acres)	: Total Estimated Federal Cost	: % Fed. Cost to Total Cost	: Total Cumu- lative Fed. Obligations 6/30/59	: % Fed. Cost as of 6/30/59	: Sched. Year Com- pletion
NEW YORK						
Ball Creek (Pilot) 2/.....	5,888	20,102	82.3	20,102	--	1957
Cowaselon Creek	69,000	596,479	48.0	80,271	13.5	1964
Dean Creek (Pilot)	6,400	131,000	75.8	125,970	96.2	1958-C
Great Brook (Pilot)	16,640	68,100	47.3	68,100	100.0	1958-C
Little Hoosic (Pilot) ...	21,760	469,000	83.3	204,105	43.5	1960
NORTH CAROLINA						
Abbotts Creek	115,300	1,025,290	48.9	112,978	11.0	1965
Bear Creek	38,650	389,527	52.8	131,833	33.8	1963
Burnt Mill Creek	10,496	28,372	29.8	4	0.0	1963
Deep Creek (Washington County)	18,246	164,068	49.5	10,649	6.5	1961
Deep Creek (Yadkin Co.) .	75,300	823,349	60.1	140,614	17.1	1964
Folley Ditch	3,170	26,049	52.5	14,773	56.7	1960
Grindle Creek	51,871	329,206	32.6	167,979	51.0	1964
Head of Little Tennessee River	(See Interstate projects below)					
Horse Swamp-Flat Creek ..	9,330	73,767	42.9	9,337	12.7	1961
Mud Creek	71,850	791,001	43.0	46,073	5.8	1963
Muddy Creek	64,000	597,091	57.6	5,044	0.8	1964
Third Creek (Pilot)	66,240	721,000	59.1	542,388	75.2	1960
NORTH DAKOTA						
Elm River	221,696	762,608	51.2	110,872	14.5	1963
Swan-Buffalo Creek	203,520	717,289	44.3	79,960	11.1	1963
Tewaukon Watershed	(See Interstate projects below)					
Tongue River (Pilot)	419,200	3,816,000	89.5	2,441,566	64.0	1960
Wild Rice Creek	(See Interstate projects below)					
OHIO						
Rocky Fork-Clear Creek (Pilot) 2/.....	28,045	91,866	47.6	91,866	100.0	1957
Upper Hocking River (Pilot)	21,121	1,361,000	80.3	1,170,489	86.0	1961
Upper Wabash	80,540	799,532	63.4	6,115	0.8	1964
OKLAHOMA						
Bear, Fall, and Coon Creek	120,960	1,301,010	68.4	676,165	52.0	1963
Big Wewoka Creek	172,525	2,257,342	51.4	1,154,313	51.1	1966
Double Creek (Pilot)	33,280	416,000	60.0	398,637	95.8	1959-C
Little Deep Fork Creek ..	167,488	1,504,330	44.3	911,915	60.6	1969
Little Wewoka-Graves Creek	122,445	991,099	47.5	607,095	61.3	1967
Long Branch	28,160	334,954	51.3	241,594	72.1	1961

State and Watershed	Total Watershed Area (Acres)	Total Estimated Federal Cost	% Fed. Cost to Total Cost	Total Cumulative Federal Obligations 6/30/59	% Fed. Cost as of 6/30/59	Sched. Year Completion
<u>OKLAHOMA (CONTINUED)</u>						
Sandy Creek	147,243	1,587,775	48.0	367,495	23.1	1968
Salt Creek	152,000	1,391,716	52.4	5,956	0.4	1969
Whitegrass-Waterhole Creek	29,575	542,306	42.6	31,859	5.9	1963
<u>OREGON</u>						
Little Pudding River ..	36,246	1,468,301	85.0	993,715	67.7	1963
Lynx Hollow	11,720	246,836	62.1	176,388	71.5	1963
<u>PENNSYLVANIA</u>						
Corey Creek (Pilot) ...	16,000	65,204	36.0	65,204	100.0	1958-C
Jacks Run (Pilot) 1/...	--	--	--	--	--	--
Lackawaxen Tribs.	26,625	176,456	36.9	112,162	63.6	1963
Little Schuylkill River	86,848	1,937,388	85.8	17,767	0.9	1965
North Fork of the Cowanesque River	7,650	191,233	72.5	13,918	7.3	1960
<u>SOUTH CAROLINA</u>						
Brushy Creek	23,512	412,620	57.0	48,764	11.8	1964
Coneross Creek	43,300	455,014	57.7	145,799	32.0	1961
Twelve Mile Creek (Pilot)	78,720	1,224,000	53.3	768,078	62.8	1963
Wateree Creek	35,000	293,549	66.9	1,787	0.6	1964
<u>SOUTH DAKOTA</u>						
Brule Creek	142,720	1,747,955	54.5	--	0.0	1967
Pattee Creek	25,462	306,307	48.8	9,897	3.2	1964
Richland Creek	6,515	60,098	48.4	7,024	11.7	1962
Scott Creek (Pilot)	2,560	140,000	84.5	134,312	95.9	1958-C
Silver Creek	20,661	260,769	71.1	74,102	28.4	1962
Tewaw Kon Watershed ...	(See Interstate projects below)					
Wild Rice Creek	(See Interstate projects below)					
<u>TENNESSEE</u>						
Indian Creek	(See Interstate projects below)					
Jennings Creek	46,150	1,901,038	88.4	10,631	0.6	1964
Johnson Creek	22,610	510,609	65.3	259,406	50.8	1961
Lick Creek	168,392	4,488,819	72.7	21,913	0.5	1967
Meridian Creek	12,300	207,177	64.6	14,677	7.1	1963
Muddy Creek	(See Interstate projects below)					
Thompson Creek	18,700	241,251	48.5	93,968	39.0	1963
Wolf River Tribs. (Pilot)	14,528	533,000	58.6	434,225	81.5	1961
<u>TEXAS</u>						
Agua Dulce Creek	228,720	95,492	7.4	1,206	1.3	1964
Alamo Arroyo	83,603	652,865	98.2	620,526	95.0	1963

State and Watershed	Total Watershed Area (Acres)	Total Estimated Federal Cost	% Fed. Cost to Total Cost	Total Cumulative Federal Obligations 6/30/59	% Fed. Cost as of 6/30/59	Sched. Year Completion
TEXAS (CONTINUED)						
Auds Creek.....	31,670	481,330	54.3	150,495	31.3	1961
Calaveras Creek (Pilot)...	61,440	616,000	59.0	588,150	95.5	1961
Chiltipin-San Fernando Creeks.....	215,740	1,533,536	53.4	119,723	7.8	1964
Cow Bayou (Pilot).....	65,920	1,091,000	54.9	831,388	76.2	1961
Cummins Creek.....	204,896	2,258,153	46.7	1,084,732	48.0	1966
Diablo Arroyo.....	40,992	425,808	96.2	415,307	97.5	1961
Dry Devils River and Lowery Draw.....	149,120	1,662,349	77.4	1,151,277	69.3	1962
Escondido Creek (Pilot)...	51,200	846,000	55.9	811,266	95.9	1961
Green Creek (Pilot).....	67,200	1,096,000	70.7	1,061,324	96.8	1959-C
Johnsons Draw.....	101,760	1,156,769	65.9	1,123,569	97.1	1961
Knob Creek.....	23,870	509,064	69.0	16,935	3.3	1963
Langford Creek.....	25,030	346,111	56.3	106,378	30.7	1963
Lower Brushy Creek.....	138,240	2,821,081	52.7	300,819	10.7	1966
San Diego-Rosita Creeks...	222,450	1,443,557	50.8	72,058	5.0	1964
Sulphur Creek.....	85,120	1,800,994	86.8	1,517,388	84.3	1962
Turkey Creek.....	18,880	48,274	14.8	41,259	85.5	1961
Upper Brushy Creek.....	191,360	2,858,314	58.1	892,052	31.2	1966
Upper Lake Fork.....	145,472	1,386,400	57.5	93,446	6.7	1963
York Creek.....	93,824	1,992,239	68.8	45,728	2.3	1963
UTAH						
American Fork-Dry Creek...	118,710	1,677,855	44.3	30,916	1.8	1969
Green's Lake.....	6,235	291,944	87.4	282,387	96.7	1962
Mill Canyon-Sage Flat....	15,295	162,273	80.6	155,304	95.7	1961
North Fork of Ogden River:	42,800	292,990	51.5	9,030	3.1	1967
Pleasant Creek (Pilot)...	10,880	434,000	78.1	410,675	94.6	1960
Santaquin Canyon (Pilot)...	25,600	165,000	78.5	153,586	93.1	1960
VIRGINIA						
Back Creek.....	22,340	33,267	10.4	16,663	50.1	1962
East Fork Falling River (Pilot).....	41,997	292,000	59.4	283,647	97.1	1959-C
Mountain Run.....	28,700	168,894	31.0	134,321	79.5	1962
WASHINGTON						
Chimacum Creek.....	24,965	178,124	51.1	--	0.0	1967
Lacamas Creek Tribs.....	13,972	545,897	43.8	292,245	53.5	1967
Mission Creek (Pilot).....	54,400	339,749	99.1	339,749	100.0	1958-C
Saar Creek.....	11,233	111,150	44.3	84,442	76.0	1967
Spring Valley Creek (Pilot) 2/.....	54,400	4,293	--	4,293	--	1954

State and Watershed	Total : Watershed : Area : (Acres)	Total : Estimated : Federal : Cost	% Fed. : Cost to : Total : Cost	Total Cumu- : lative Fed. : Obligations : 6/30/59	% Fed. : Cost : as of : 6/30/59	Sched. : Year : Com- : pletion
WEST VIRGINIA						
Dave's Fork-Christian's Fork.....	4,154	211,746	82.8	144,301	68.1	1962
Marlin Run.....	1,035	155,259	95.3	90,147	58.1	1961
Salem Fork of Ten Mile Creek (Pilot).....	5,760	370,000	82.1	346,958	93.8	1959-C
Upper Grave Creek.....	4,920	432,196	67.4	358,340	82.9	1962
WISCONSIN						
Alma-Mill Creek.....	10,957	171,871	74.4	163,245	95.0	1963
Bogus Creek.....	7,576	69,020	58.0	211	0.3	1964
Coon Creek.....	92,589	469,770	62.0	194,218	39.1	1963
Lost Creek.....	5,189	138,692	79.7	129,088	93.1	1963
Mill Creek.....	39,096	447,512	86.3	105,320	23.5	1963
West Fork of Kickapoo River (Pilot).....	17,945	153,000	81.4	145,940	95.4	1958-C
WYOMING						
London Flats-Bovee.....	18,588	358,925	86.8	20,072	5.6	1964
Pine Ridge-Case Bier.....	25,666	276,295	84.6	263,245	95.3	1962
INTERSTATE PROJECTS						
Furnace Brook-Middle River						
Connecticut.....	30,326	---	---	120,173	---	---
Massachusetts.....	3,000	---	---	---	---	---
Total.....	33,326	1,049,669	53.7	120,173	11.4	1963
Head of Little Tennessee River						
Georgia.....	29,626	---	---	---	---	---
North Carolina.....	7,067	---	---	---	---	---
Total.....	36,693	273,461	59.8	---	0.0	1964
Indian Creek						
Mississippi.....	6,370	---	---	1,573	---	---
Tennessee.....	15,630	---	---	198,290	---	---
Total.....	22,000	411,384	69.0	199,863	48.6	1963
Muddy Creek						
Mississippi.....	67,060	---	---	64,959	---	---
Tennessee.....	13,735	---	---	13,256	---	---
Total.....	80,795	2,007,612	65.6	78,215	3.9	1965
Pine Barren Creek						
Alabama.....	6,000	---	---	716	---	---
Florida.....	55,600	---	---	4,168	---	---
Total.....	61,600	317,734	53.5	4,884	1.5	1965

State and Watershed	Total Watershed Area (Acres)	Total Estimated Federal Cost	% Fed. Cost to Total Cost	Total Cumu- lative Fed. Obligations 6/30/59	% Fed. Cost as of 6/30/59	Sched. Year Com- pletion
INTERSTATE PROJECTS (Cont'd)						
Tewawkon Watershed						
North Dakota.....	63,195	---	---	6,149	---	---
South Dakota.....	30,587	---	---	---	---	---
Total.....	93,782	520,299	54.7	6,149	1.2	1965
Walnut Creek						
Kansas.....	76,869	---	---	6,327	---	---
Nebraska.....	3,725	---	---	---	---	---
Total.....	80,594	1,672,387	55.6	6,327	0.4	1964
Wild Rice Creek						
North Dakota.....	158,182	---	---	5,534	---	---
South Dakota.....	75,340	---	---	31,992	---	---
Total.....	233,522	671,929	53.8	37,526	5.6	1963

1/ Project not authorized, no local sponsor.

2/ Terminated before completion at sponsor's request.

3/ Project installations completed.

Works of Improvement Installed in Watersheds

(Pilot and P. L. 566 Watersheds)

Data indicative of the nature of the works of improvement installed through June 30, 1959 are presented in the following table:

Measure	Unit	1959 Accomplishments (Actual)		Total on the Land to 6/30/59
		With Watershed Protection Funds	With Conserva- tion Operation Funds	
<u>Land Treatment Measures:</u>				
Contour farming	Acre	12,365	14,555	422,388
Cover cropping	Acre	24,121	25,085	279,363
Crop residue utilization	Acre	35,643	39,150	639,016
Stripcropping	Acre	2,627	3,339	105,578
Pasture planting	Acre	29,929	35,486	535,372
Revegetation	Acre	--	158	9,845
Range improvement	Acre	17,937	8,160	207,975
Terraces	Mile	710	633	26,969
Diversions	Mile	57	62	2,329
Pond construction	No.	432	660	13,190
Waterway development	Acre	802	923	23,342
Tree planting	Acre	893	1,970	34,662
Woodland protection	Acre	1	--	20,961
Wildlife area improvement	Acre	1,428	798	11,378
Erosion control structures ...	No.	65	188	5,451
<u>Structural and Land</u>				
<u>Stabilization Measures:</u>				
Floodwater retarding structures	(: No.	100	--	371
	(:Ac.Ft.	75,180	--	219,217
Stabilization and sediment control:				
(a) Structures	No.	71	--	1,667
(b) Silt and debris basins .	No.	19	--	229
Subwatershed waterway improvement:				
(a) Outlet construction	Mile	10	--	95
Stream channel improvement:				
(a) Channel stabilization ..	Mile	2	--	41
(b) Channel improvement	Mile	105	--	301
Diversion ditches and dikes ..	Mile	3	--	87
Stabilization of critical area:				
(a) Roadside erosion control	Mile	84	13	680
(b) Revegetation	Acre	6,796	397	37,938

Soil Surveys and Farm Conservation Plans in Watersheds

(Pilot and P. L. 566 Watersheds)

Item	: 1959 (Actual : With Watershed : Protection : Funds)	: Totals in Project Area : (Including "Conservation : Operations") Cumulative : June 30, 1959
Soil surveys (acres)	332,082	7,962,784
Total number cooperators	2,494	37,924
Basic conservation plans:		
Number	2,352	28,276
Acres	396,857	5,606,905

Pilot Watershed Projects Demonstrate Program Effectiveness

Structural measures and land treatment installations in pilot watershed projects are already demonstrating the effectiveness of the watershed protection and flood prevention program as evidenced by the following typical examples from individual projects:

1. Arkansas - Six Mile Creek Watershed

As of June 30, 1959, about 95 percent of the land treatment measures estimated to cost \$1,143,000 had been installed for protection of the 20,000 acres of cropland, 34,000 acres of woodland, and 110,000 acres of grassland in the project. Of the 1,039 farmers in the project, 1,035 were district cooperators and 1,003 had developed basic farm conservation plans. The land treatment measures applied included 105 miles of terraces, 45,000 acres of improved permanent pasture, 15,000 acres of cover crops, 57,000 acres of rangeland management and improvement, 867 acres of tree planting, and 21 miles of road side erosion control work. Twenty-four floodwater retarding structures and 28 miles of channel improvement had been completed as of this same date. Three towns in the watershed plan to augment their water supplies from nearby floodwater retarding structures. As a result of the increased water supplies two new industries have located in the watershed. This project is scheduled for completion during fiscal 1960.

The installations of land treatment and structural measures are credited with reducing the flood damages by 50 percent following a heavy rainstorm in April of 1957. Had a complete program been in place, the reduction in damages would have been an estimated 77 percent. The chairman of the Franklin County Soil Conservation District Board of Supervisors stated that "After a period of extreme and continued rainfall, the greatest since 1902, the Six Mile Creek Project performed according to expectations." A landowner in the lower flood plain experienced some flooding for less than 24 hours following the April, 1957, storm. He stated that this was the only time the creek overflowed his lands, and that without the project his farm would have been flooded at least 12 times during the spring of 1957, when the Arkansas River remained at flood stage for 55 days.

2. Kansas - Little Delaware and Mission Creek Watershed

Over 70 percent of the planned land treatment measures, costing an estimated \$227,000, had been applied in this 28,160 acre watershed as of June 30, 1959. Of the 194 landowners in the watershed, 178 had developed basic farm conservation plans and about one-third of these had their plans completely applied on the land. The measures applied included 443 miles of the needed 690 miles of terraces and 872 of the needed 1,000 acres of waterways. In addition to the eight floodwater retarding structures, 21 grade stabilization structures and 1.4 miles of waterway improvements had been completed at a Federal cost of \$372,187 to complete the structural measures planned. Land treatment is scheduled for completion by the end of the fiscal year 1960.

Flood damages in this watershed were minor following a 4-3/4 inch rain-storm that fell within six hours on July 30, 1958. Runoff filled the eight floodwater retarding dams from 70 percent to 100 percent of capacity. Damages to crops, roads, and bridges in adjoining untreated watersheds was severe with growing crops a total loss. Where minor flooding did occur in the watershed floodplain, damages were minimized by the effectiveness of the land treatment measures in the reduction of sediment deposition.

3. Minnesota - East Willow Creek Watershed

Only one unusual storm has occurred in this 24,000 acre watershed since the completion of the structural measures. The storm occurred in the spring of 1959 pouring four inches of rain over the watershed in a short time. Many farmers and others witnessed the runoff from this flash flood as it passed through the 24 inch drawdown tubes of the floodwater retarding structures over a period of several days as a quiet stream and felt more at ease now that they knew the effectiveness of the structures. The local people are extremely interested in their watershed work as evidenced by the "Dam-o-Rama Field Day" held in August 1958, which attracted some 5,000 people. This interest is further documented by the fact that the landowners had applied by June 30, 1959 more than 90 percent of the land treatment measures called for in the work plan at an estimated cost of \$150,000. One hundred and thirty-eight of the 160 farmers in the watershed are cooperating with the soil conservation district in planning and establishing land treatment measures including terraces, diversion terraces, and stripcropping where needed. As of June 30, 1959, in addition to the six floodwater retarding structures, sixteen gully stabilization structures had been completed at a Federal cost of \$148,000 and local cost of \$30,000. The project and all construction with Federal funds was completed as of this same date, but Fillmore County is contemplating the construction of an additional floodwater retarding structure as a part of a road project in 1960.

4. Nebraska - Indian Creek Watershed

As of June 30, 1959, at least 80 percent of the planned land treatment measures had been applied in this 47,870 acre watershed at an estimated cost of \$549,000, including terracing and grassed waterways, conservation crop rotations, grass and legume seedings for hay and pasture, stock water ponds, and erosion control structures. These practices very effectively demonstrated their value from a standpoint of conserving soil and water on the land and prevention of gully erosion. They have substantially reduced reservoir sediment deposition and detention storage requirements. In addition to the installation of 20 of the 29 planned floodwater retarding structures, 32 of the 36 planned grade stabilization structures and five other grade control structures and appurtenances had been installed at a total contract cost of \$320,365 as of June 30, 1959. Basic farm conservation plans had been developed on 273 of the 320 farms in the watershed area. This project is scheduled for completion in the fiscal year 1961 at an estimated total cost of \$1,746,000.

Until the spring of 1959 when an 8-inch rainfall occurred in a short time, there had been no storms to really test the effectiveness of the land treatment and structural measures installed in this watershed. Although some flow went through the emergency spillways in several of the 20 floodwater retarding structures already installed, most of the flood runoff was contained and flood damages avoided that would have been moderate to severe had the structural and land treatment measures not been applied.

5. South Carolina - Twelve Mile Creek Watershed

As a result of land treatment, channel improvement, and installation of floodwater retarding structures, many farmers in this 78,720 acre watershed are now able to use their floodplain lands more intensively. They are no longer worried about the risk of planting crops on lands formerly subject to frequent inundation and flood damage. Each year with the establishment of additional structural measures they are devoting more land to higher income producing crops and improved pastures. State Highway and Pickens County road officials have found that the watershed installations are so effectively controlling flood runoff that they can reduce the size of drainage culverts and bridges as they are replaced below the floodwater retarding structures. Although about 85 or 90 percent of the 790 farmers in the watershed have "off farm" employment, 658 were district cooperators and 62 had completed the establishment of all land treatment work called for in their basic farm conservation plans as of June 30, 1959.

Land treatment throughout the watershed is progressing steadily and especially in the drainage areas above the six floodwater retarding structures where it was from 75 to 100 percent complete as of June 30, 1959. The major land treatment measures established include 2,449 acres of grasses and legumes, 3,179 acres of pasture planting, gully control on 180 acres, roadside erosion control on 40 miles, and the planting of trees on 3,179 acres. Channel improvement has been completed on 16.3 miles of creek channel and four more floodwater retarding structures remain to be constructed to complete the watershed project by the end of the fiscal year 1963 at a total Federal cost of \$1,224,000 and \$1,190,361 non-Federal.

6. Tennessee - Wolf River Tributaries Watershed

Floodplain land, previously abandoned for crops and pasture due to floodwater and sediment damages, is being used again for production of agricultural crops in this 14,528 acre watershed. The effectiveness of the installations of land treatment and structural measures has already been demonstrated following heavy rainstorms in September 1958 when eight inches fell in three days in the Sand Creek portion of the watershed. There was no floodwater damage from overbank streamflow. Due to effectiveness of the project installations, the Shelby County road commission found that the length of one of the bridges planned below the structures could be reduced from 91 feet to 51 feet in length, resulting in a savings of \$6,000 in construction costs. Five of the 12 floodwater retarding structures had been completed by June 30, 1959, and another was under construction. One of the retarding dams already completed is a multi-purpose structure, including additional storage for irrigation and recreation. Three additional structures are planned for construction in the fiscal year 1960. The total estimated Federal cost of all the structures, including 14 miles of channel improvement, is \$516,000. More than 70 percent of the planned land treatment measures, costing \$286,000 and including pasture planting, tree planting, road side erosion control, and installation of gully plugs, had been applied as of June 30, 1959.

Installations in P. L. 566 Projects Providing Protection

As of June 30, 1959, the installation of land treatment and structural measures for watershed protection and flood prevention had been completed in 5 of the 107 P. L. 566 projects that had been approved for construction and work was progressing well in most of the other 102 projects. The measures installed were already proving their effectiveness in reducing floodwater damage and soil erosion as evidenced in the typical examples selected below:

1. Alabama - Clear Creek Watershed

A 4-inch rainstorm occurring in a 24 hour period on January 23, 1959, did not inundate the floodplain in this 11,800 acre watershed except in a small area near the confluence of Clear Creek and Paint Rock River where water was forced out of the newly constructed channel by the Paint Rock River which was already at high flood stage. The completion of the planned 4-1/2 miles of channel improvement very effectively prevented damages to the 679 acres of floodplain lands and crops that would surely have occurred without the project installations. Approximately 80 percent of the land treatment measures estimated to cost \$17,600 had been applied as of June 30, 1959, bringing the formerly excessive erosion in the uplands under control. Of the 14 farmers in the project, 10 have developed basic conservation plans. The major land treatment practices applied include tree planting, conservation crop rotations, waterway development, pasture planting, farm drainage ditches and terraces. The total estimated cost of the project is \$110,612 with the local sponsors contributing \$28,830 of this amount.

2. Florida - Lake Placid East Chain of Lakes Watershed

A 6-inch rainfall from a storm on June 18, 1959, caused no floodwater damages in this 12,500 acre watershed, due to the effectiveness of the project installations. A similar storm in 1953 caused a 3-foot rise in Lake Grassey and did extensive damage, flooding 60 acres of specialty crops (caladiums and Easter lilies), 15 acres of truck crops, 300 acres of pasture, and washed out a country road and isolated six families. When the storm occurred, the lake stages immediately rose but remained within the design stage for each and returned to normal within the design period, demonstrating the effectiveness of the two drop spillways, one drop inlet, 2,600 feet of channel improvement and 9,000 feet of ditches already completed at that time. The remaining structural measures are scheduled for installation in the fiscal year 1962 to complete the project. More than 80 percent of the planned land treatment measures had been installed by June 30, 1959. The total cost of the project installations is estimated \$93,174 with the local sponsors bearing \$12,998 of this amount.

3. Georgia - Rooty Creek Watershed

Moderate rainstorms have occurred in this 29,483 acre watershed since the completion of three of the four planned floodwater retarding structures, but there has been no damage to the agricultural lands from floodwater or sediment. On adjacent untreated watersheds extensive flooding has occurred. Prior to the project installations damaging floods occurred three or four times each year. It is estimated that the project installations will reduce the annual damage from flooding from \$26,191 to \$2,484. As of June 30, 1959, work was nearing completion on the remaining floodwater retarding structure and 17,693 feet of channel improvement. This leaves eight miles of channel improvement remaining to be done to complete

all planned structural measures. Land treatment on the 100 farms in the watershed was approximately 75 percent complete on June 30, 1959, and 87 of the farms were covered by basic conservation plans. The entire project is scheduled for completion in the fiscal year 1962 at an estimated total cost of \$400,527 with the local sponsors assuming \$131,978 of this as their share.

4. New Mexico - Hatch Valley Arroyos Watershed

Installation of the planned six floodwater retarding structures and appurtenant disposal systems have protected agricultural lands in this 14,521 acre watershed from floodwater and sediment that caused thousands of dollars in damages in adjacent untreated watersheds. Some of the structures were tested even prior to completion. One structure while under construction in the summer of 1957, received and effectively controlled flood runoff from three small and two moderately heavy storms, all of which would have caused damages below. Another structure completed in the summer of 1958, controlled flood runoff from three storms of approximately three inches rainfall each and prevented at least \$11,500 in crop loss and damage to farmstead and irrigation facilities. All of the six structures installed have effectively controlled flooding since their completion. All of the farmers within the damage area (all cropland) are cooperating with the Caballo Soil Conservation District and as of June 30, 1959, have applied all the land treatment measures called for in their conservation plans. Proper grazing management has also been carried out on the range lands. All project installations called for in the watershed work plan were completed in this project in the fiscal year 1958 at a total Federal cost of \$311,407.

5. Oklahoma - Big Wewoka Watershed.

With 14 of the planned 42 floodwater retarding structures completed, only one structure discharged water through the emergency spillway following an August 1958 storm that poured 11 inches of rainfall upon the watershed. Without the structures and land treatment measures established, floodwater damage to agricultural lands, cities, highways, and public utilities in this 172,525 acre watershed would have been extensive. Many instances of benefits from the project installations have been proclaimed by landowners and County Commissioners. In addition to the 14 floodwater retarding structures completed as of June 30, 1959, construction was under way on seven more, and an additional three were being contracted during the 1960 fiscal year. Seven hundred and fifty-two of the 1,143 landowners in the project had developed basic farm conservation plans and applied more than 70 percent of the planned land treatment measures, which are estimated to cost \$1,582,894, and include pasture planting, sprigging, critical area planting, and pond construction. Establishment of land treatment measures has been given highest priority in the watershed and will be installed ahead of schedule. The project installations are scheduled for completion in the fiscal year 1966 at an estimated total Federal cost of \$2,257,342 and local non-Federal cost of \$2,134,712.

6. West Virginia - Upper Grave Creek Watershed

A severe storm in 1958 in this 4,920 acre watershed in Marshall County produced no damages to the urban area of Cameron which is protected by two floodwater retarding structures. Before these structures were built, damages to stores, businesses, factories, and public utilities averaged \$90,000 a year. Flash floods caused by the bottleneck where a half-dozen steep little tributaries join Upper Grave Creek often roared down the main street. Some 1,700 residents of the City of Cameron were affected by floods regularly. Then another kind of water problem arose. Water supplies for home and industry became scarce as the town grew and wells in the nearby hills went dry each summer. Tank trucks volunteered by a milk company brought emergency water from Clarksburg. Many townsfolk considered leaving as the future for Cameron looked dim.

The Watershed Protection program seemed to be the solution to their difficulties. Getting easements, issuing bonds, and raising needed funds was a real problem. The people of Cameron incorporated their City Planning Commission to give it legal teeth. At election time they put 4 new pro-watershed members into the City Council. They raised the water taxes for the first time in 57 years. In a 10-day fund drive the Cameron Fire Department raised \$26,000 in cash and pledges although its part of the goal had only been \$15,000. Two local school teachers assisted Service technicians in the drafting of the watershed work plan. Farmers cooperated by agreeing to accelerate the application of conservation land treatments and grant easements wherever the structures were needed.

As of June 30, 1959, four of the six planned floodwater retarding structures had been completed, one with connections to city fire hydrants. Another multiple purpose structure was under construction to bolster the town's water supply. The remaining two dams and 3.6 miles of channel improvement are to be constructed in the fiscal year 1960. The total estimated cost of the project installations is 641,205 with the local people assuming \$209,009 of this as their share.

Projects Include Agricultural Water Management Features

Forty of the 180 projects approved for operation as of June 30, 1959, include structural measures for agricultural water management purposes in addition to flood prevention features. Thirty-three of these include drainage measures, five irrigation, and two include both drainage and irrigation. The total installation cost of the agricultural water management features in these 40 projects amounts to approximately \$6,000,000. The local people are to bear about \$3,500,000 of this cost. The total estimated cost of structural measures for all purposes in these 40 projects is about \$18,000,000.

A few typical examples of P. L. 566 projects where the local people are installing locally important measures to develop, conserve, more efficiently utilize, and dispose of water resources follow:

1. Delaware - Bear Hole Watershed

The principal problems in this 4,523 acre watershed were flood damages to crops and land and poor drainage. Structural measures were estimated to cost \$230,932 of which \$115,466 was allocable to drainage benefits with the local organization assuming \$64,084 as its share. Construction was completed in March of 1959 with the installation of 29 miles of open channels involving land clearing, excavation of 288,248 cubic yards of earth, and leveling of spoil bank. Reports indicate that there has been no loss to crops near main channels due to flooding. Nor have the farmers away from the main channels suffered damages where farm ditches had been installed to tie in with the outlet channel. These farmers had previously suffered severe losses and in many cases were not able to plant crops at all due to flooding and poor drainage.

2. Maryland - Timmonstown Branch Watershed

The principal problems in this 8,655 acre watershed were flooding and poor drainage on 4,674 acres of cropland due to a heavy sediment accumulation in the main drainage outlets. Construction began on August 11, 1958 and as of June 30, 1959, about eight miles of channel improvement and 130 acres of clearing for channel construction had been completed. Approximately 50 percent of the structural measures estimated to cost \$231,663 were complete as of this same date. Of this cost, \$104,817 was allocable to drainage improvements with the local organization sharing \$58,174 of this amount. Future effectiveness of the project has already been demonstrated by the fact that pilot channels constructed on the lower end of the project in the summer and fall of 1958 successfully carried off floodwater from heavy rains in the spring of 1959 with much less damage than had been caused by similar rains prior to the beginning of the construction.

3. Utah - American Fork and Dry Creek Watershed

The principal agricultural water management problems in this 118,710 acre watershed in northern Utah County center around the conservation and use of available irrigation water supplies for 23,720 acres of irrigated farmland. In eight out of ten years, 29 percent of the lands served by American Fork and Dry Creek have had an inadequate supply of late season water. The structural measures planned will increase irrigation efficiency, reduce water losses and erosion of ditches, and provide additional water for late season use. These measures include construction of the 921 acre-feet capacity Silver Lake Flat reservoir, 176,586 feet of canal lining, two drop spillways, two desilting basins, 11,920 feet of pipe lines, one diversion dam, eight overnight storage reservoirs, and 3.1 miles of ditch construction. The total installation cost of these agricultural water management measures is estimated to be \$1,059,780 with the ten local sponsors bearing \$588,180 of this amount. This project was approved for construction of structural measures on June 26, 1959. Actual construction is not expected to get underway until the spring of 1960.

4. Virginia - Back Creek Watershed Project

This watershed including 22,340 acres in Pulaski County was authorized for operations on June 28, 1957, and construction contracts were awarded on July 11, 1958. The main problems were flood damages and poor drainage on 1,002 acres of flood plain which were prior to establishment of the project suitable only for poor grade native pasture. Flooding and poor drainage due to entrapped water in numerous low areas prevented the proper treatment and establishment of improved pasture mixtures. The structural measures consisting of 11.14 miles of channel improvement were completed in October of 1958 at an estimated total cost of \$24,836. The cost allocable to drainage benefits amounted to \$12,418 with the local people sharing \$6,914 of this amount. Although there has not been a storm of sufficient magnitude to effectively test the structural measures since their completion, the drainage phases are already proving to be very effective as evidenced by establishment of improved pastures and better use of the floodplain lands.

5. Washington - Saar Creek Watershed

Water management measures in this 11,233 acre watershed project in Whatcom County consist of 13.3 miles of channel improvement. The main problems were poor drainage and floodwater and sediment damage to cropland, roads, bridges and other private and public property. Saar Creek is located on a low alluvial fan and does not follow the lowest course through the valley. Floodwaters leaving the creek prior to reconstruction did not return to the creek channel but spread over the land inundating up to 2,000 acres for two weeks or more. As of June 30, 1959, approximately 70 percent of the structural measures estimated to cost \$118,998 were completed. Of this amount, \$12,393 was allocable to drainage improvements with the local people contributing \$4,644 of this. The effectiveness of the project has already been demonstrated. When construction was started in 1958, the driest summer on record occurred. Saar Creek dried up. However, unusually damaging and frequent storms occurred during the winter of 1958-59. That part of Saar Creek where construction was completed performed as planned. Where no construction had been done the creek overflowed its banks and all adjoining land was flooded.

Watershed Project Benefits Greatly Exceed Costs

For every \$1.00 invested in the total cost of the structural measures in the 180 approved projects a return of about \$2.00 is expected. The total average annual benefit from structural measures is estimated to be \$11,179,000 and the total average annual cost is estimated to be \$5,622,000. The total installation cost of the 180 projects is about \$214,900,000. About \$122,000,000 of the cost will be borne by funds appropriated under authority of P. L. 566 and the remainder of \$92,900,000

will be borne by State, local, and other Federal interests. Structural measures comprise \$136,800,000 of the total installation cost. P. L. 566 funds will bear \$112,500,000 of this cost and local interests will assume the balance of \$24,300,000.

Many economic studies and years of experience have shown that benefits from land treatment measures exceed costs, thus benefit-cost calculations are not made for land treatment measures for watershed protection. Of the total land treatment measure cost of \$78,000,000, the Federal Government through Watershed Protection appropriated funds will bear \$9,300,000 and other interests \$68,700,000. Local organizations will bear all operation and maintenance costs.

Costs of Foundation Investigations Reduced

An extensive training program has been carried on in the Soil Conservation Service for engineers and geologists in the classification of soils for engineering uses and the application of this system of classification to the foundation investigations for and design of earth dam embankments. This training has had a significant effect on the efficiency of operations in these fields. The technicians involved are now able to discern soil properties that influence the design and construction of earth dam embankments. With this ability, they can often eliminate the customary soil mechanics laboratory tests. This is especially significant for relatively low dams of low failure hazard. In many such cases this knowledge of the general properties of the various classifications together with the ability to make proper field identifications enables field technicians to proceed with the design of the earth dam embankment without the delay and cost occasioned by soil sampling and laboratory testing. In many other cases, the amount of testing can be reduced because of better classification of the foundation and borrow pit materials. Proper logging of foundation strata in the unified classification system permits taking fewer undisturbed samples for laboratory testing which further increases efficiency.

Cost of Gathering Topographic Information Needed for Structural Design

Sampling studies made during the fiscal year 1959 show that the preparation of topographic maps by Kelsh Plotter has saved time of technical staff in the field during the last three years estimated to exceed \$215,000 in value when compared to the conventional method of field surveying and plotting. In one test case, a site for a floodwater retarding structure in the Upper Hocking Pilot Project, Ohio, was mapped by both the Kelsh Plotter and by conventional ground methods. The topographic maps produced by field surveying and reducing and plotting the survey notes for the site and reservoir area required 319 man-days technical time valued at \$6,228. The cost of the topographic map produced by the Kelsh Plotter, including the field establishment of ground control points and the cost of the aerial photographs, amounted to \$845--an actual saving of \$5,383 for this one structure site alone. While the saving in technical time is the most significant item, there are other advantages to using the new method. Surveys can be completed quicker with a minimum interruption to the landowners and with minimum damage to crops and trees. The topographic map prepared by the Kelsh Plotter is more complete and useful and work can be done during periods of inclement weather.

Operations at the SCS Soil Mechanics Laboratory

The function of the Soil Mechanics Laboratory at Lincoln, Nebraska, a section of the Engineering Division of the Soil Conservation Service, is (a) to perform the routine classification tests and the more complex tests such as consolidation, triaxial shear, and permeability, on those soil materials proposed for use in earth dam embankments and on those soils encountered in the foundation and abutments at proposed sites for the various types of structures built by the Service, (b) to make recommendations to design engineers on the use of these embankment and foundation materials in the structures being designed, (c) to prepare technical material in the field of soil mechanics for the guidance of design engineers in their work, and (d) to assist in the training of Service personnel in the classification of soils for engineering use and in the fundamental principles of soil mechanics applicable to Service operations.

The laboratory received 11,184 soil samples from 618 projects during the year. Of this amount all work was completed on 10,341 samples from 568 projects. A total of 32 States submitted samples on one or more projects. Samples from P. L. 566 watershed projects comprised about 50 percent of the total workload showing an increase of 234 percent over the 1958 fiscal year.

Materials Testing Sections have been established in the Engineering and Watershed Planning Units at Portland, Oregon; Ft. Worth, Texas; and Spartanburg, South Carolina, to help reduce the load of routine soil testing at the Lincoln laboratory. Their principal function is to perform the routine classification tests on samples of soil from those low hazard sites where such identification of soil types is adequate for safe design of the structure.

LOANS AND RELATED EXPENSE

Loan Activities

Under Section 8 of Public Law 566, 83rd Congress, as amended by Public Law 1018 of the 84th Congress, loans are authorized to be made to local organizations to defray the local share of the cost of watershed protection projects. The Farmers Home Administration is responsible for making loans under the provisions of the Act for watershed projects which have been approved for the installation of works of improvement. Since this law requires that all of the costs allocated for flood prevention purposes except the costs of easements and rights-of-way be paid from Federal funds, most of the loans are expected to be made for the local share of the cost of multiple-purpose projects. Project sponsors usually make local arrangements to secure funds needed for the costs of easements and rights-of-way and the costs of contract administration although some applications for loans have included funds for this purpose.

No loans will be made under this authority for the local costs of land treatment measures installed in the project primarily for watershed protection purposes even though the cost of these measures is usually a large share of the total cost of the project. These land treatment measures benefit the lands upon which they are applied and the costs are normally borne by the individual landowners rather than by the sponsoring organization although

Federal cost-sharing and technical assistance is available for most of these measures through other Departmental conservation programs.

First Loans Approved

The first loan under the authority of Section 8 was closed in July 1959 for the amount of \$35,000 to the Thorofare Meadow Co., a cosponsor with the Locust Island Meadow Co. and the Salem Cumberland Soil Conservation District of the Silver Lake-Locust Island watershed project in Salem County, New Jersey. Two large dikes with sluice-way will be constructed, providing both flood protection and drainage benefits to the members of these mutual nonprofit Meadow companies. The total cost of the structural works is estimated to be \$192,672 of which the local share will be \$32,775.

A loan of \$30,000 was conditionally approved in May 1959 to the Camp Bayou Watershed Improvement District, a cosponsor with the Ashley County Soil Conservation District of the Camp Bayou Watershed in Ashley County, Arkansas. Channel improvement work will be installed on 9.8 miles of main channel and 18.5 miles of laterals which will serve both flood prevention and drainage purposes. Federal installation costs of these structures are estimated at \$103,525 and local costs at \$55,036.

The \$337,500 loan request of the Lower Willow Creek Drainage District was conditionally approved in June 1959 to finance the local share of constructing an irrigation water supply reservoir and a distribution canal. These works of improvement will provide flood prevention and supplementary irrigation water in the Lower Willow Creek Watershed in Granite County, Montana. The Federal cost of installing these structures is estimated at \$253,830 and local costs at \$292,520.

During the fiscal year 1959, 20 applications for watershed protection loans totaling more than \$3½ million were received by the Farmers Home Administration. There were about 26 active applications for loans, totaling more than \$6 million, in various stages of counseling, investigation, and examination at the close of the fiscal year 1959.

The City of Litchfield, Illinois, a cosponsor of the Shoal Creek Watershed project, Montgomery County, has applied for a loan of \$1,336,598 to help finance two floodwater retarding structures consisting of 7,140 feet of floodwater detention and one multiple-purpose structure for flood detention and municipal water supply. Federal installation costs of these three structures are estimated at \$242,614. Structural measures to be installed in the watershed by other cosponsoring local organizations consist of four floodwater retarding structures, one multiple-purpose structure for municipal water supply and floodwater detention, and approximately 24 miles of channel improvement. All structures to be installed in the watershed will provide an aggregate capacity of 26,833 acre feet for floodwater detention and 30,173 acre feet of storage for municipal water supply.

The American Fork-Dry Creek Watershed Conservancy District, one of the sponsors of the American Fork-Dry Creek Watershed project in Utah County, Utah has applied for a loan of \$413,900 to help defray its share of the cost of the structural measures to be installed to reduce floodwater damage and provide supplemental water for irrigation. These measures consist of four debris basins, an irrigation storage reservoir, ditch lining, pipe lines, overnight storage ponds, ditch construction, drop spillways, desilting basins, and a diversion dam. Federal installation costs of these structures are estimated at \$1,197,395 and local costs at \$649,280.

The Sebastian River Drainage District, Indian River County, Florida, cosponsors with the Indian River Soil Conservation District of the Sebastian River Drainage District Watershed, requested a loan of \$120,000 to finance the local share of installing structural measures for flood prevention, drainage, and improvement of ground water levels for sub-irrigation during dry seasons. The structural measures include 74,010 linear feet of channel improvement, 3.7 miles of ditch construction and 6 drop spillways. The cost of installing the structural measures is estimated at \$470,480 of which the local share will be about \$135,830.

SURVEYS AND INVESTIGATIONS OF WATER RESOURCES

Agency Participation

Funds for surveys and investigations of river basin areas for inter-agency program coordination purposes have been allocated to the participating agencies in the Department as follows:

Agency	1959 Obligations	1960 Estimate	1961 Estimate
Soil Conservation Service ...	\$648,488	\$823,000	\$820,000
Forest Service	52,935	74,000	75,000
Agricultural Research Service	184,599	203,000	205,000
Total	886,022	1,100,000	1,100,000

River Basin Activities

Section 6 of P. L. 566, 83rd Congress, as amended, authorizes the Secretary of Agriculture to cooperate with other Federal, State, and local agencies in making surveys and investigations of the watersheds of rivers and other waterways as a basis for the development of coordinated programs.

The Department is represented on the Inter-Agency Committee on Water Resources which has been established to facilitate the coordination of water and related land resource activities by the various member Federal departments and agencies. Much of the actual coordinating work is done in the field. The Department maintains representation on various River Basin Inter-Agency Committees, which serve as points of contact between representatives of this Department and of other Federal departments and agencies and the States in these basin areas, to keep all concerned mutually informed of the activities of the member agencies and to facilitate matters of inter-agency coordination. The Department in 1959 maintained such representation on Committees in the Arkansas-White-Red, Columbia, Missouri, Northeast and Pacific Southwest areas. In addition, the Department is participating in special cooperative surveys and investigations in the following river basin areas:

1. Cape Fear River Basin - North Carolina

The Department is cooperating with the Corps of Engineers and the State of North Carolina in a survey of the Haw River (a tributary of the Cape Fear River) basin to develop information on economically feasible water storage opportunities. Sufficient examination also has been made of other tributaries of the Cape Fear River to ascertain the effects of possible projects and measures therein which might have a relationship to and impact on possible plans for the Haw River Basin. Information developed will be used to show the needs for resource development in the Haw River basin; various economically feasible development possibilities on the Haw; the nature, degree and location of benefits to be provided by such developments within the Haw basin and downstream; and estimates of the costs of and benefits from such developments. This survey is expected to be completed during the fiscal year 1960.

2. Delaware River Basin - New York, New Jersey, Pennsylvania and Delaware

The Department is cooperating with the Corps of Engineers in a survey and investigation of the watershed of the Delaware River in New York, New Jersey, Pennsylvania and Delaware. It is assisting in the preparation of a basin water resources report based on a projection of some 100 years. The Soil Conservation Service, Forest Service, and Agricultural Research Service are participating in the study. Some funds made available under this appropriation item have been used, but most of the cost of participation in the survey has been financed by the Corps of Engineers.

Information is being developed on the present and estimated future water requirements for domestic, livestock, irrigation and other rural uses; on storage sites in small watersheds that might be developed and other measures that might be installed to help meet those rural needs; on the effect of land treatment and structural measures for flood prevention and watershed protection on high and low stream flows and on sedimentation; and on the impact of possible reservoir inundation upon agricultural production capacity and resources. Present schedules contemplate completion of this survey in the fiscal year 1960.

3. Potomac River Basin - Maryland, Pennsylvania, Virginia and West Virginia

In cooperation with the Corps of Engineers, the Department is participating in a survey and investigation of the Potomac River watershed in Maryland, Pennsylvania, Virginia and West Virginia. It is assisting in the preparation of a basin water resources report based on a projection of some 50 years. The Soil Conservation Service, Forest Service, and Agricultural Research Service are participating in the study.

4. Upper Mississippi River and Great Lakes Basin Areas

The Soil Conservation Service is cooperating with various field offices of the Corps of Engineers in the Upper Mississippi River and Great Lakes basin areas to determine the effect upon agricultural lands and crops of proposed major drainage projects of the Corps of Engineers. Reports have been completed on the following projects: Flatrock Creek and Little Auglaize River in Ohio, Portage River in Michigan, Warroad River and Bulldog Creek, Roseau County, Minnesota, Au Gres River, Michigan, and Yellow River in Indiana.

5. Lower Mississippi River and Tributaries Project

The Department has completed its participation with the Mississippi River Commission in the review of the Corps of Engineer's Lower Mississippi River and Tributaries Project except for consultations with representatives of the Commission about the use of agricultural data supplied them. A summary report on agricultural material developed by the Department during the survey is being prepared and is expected to be completed in the fiscal year 1960.

6. Upper Colorado River Storage Project Participating Projects

The Department is cooperating with the Department of the Interior in a reappraisal of the direct agricultural benefits expected to be produced by the participating projects of the Colorado River Storage Project. Survey work is progressing in accordance with schedules established by the Bureau of Reclamation. The impacts of that project upon lands and improvements administered by this Department and the relationship between features and appurtenances of the projects surveyed and the watersheds in which they are situated have also been considered. The Soil Conservation Service, Forest Service, and Agricultural Research Service are the primary Department agencies participating in the work under this item. The Land Grant Colleges are also taking an active part in the work. Representatives of the Farmers Home Administration and the State Agricultural Stabilization and Conservation Committee and of various State agencies have provided valuable information and advice.

Reports have been completed and transmitted to the Secretary of the Interior and the Director, Bureau of the Budget, on the Vernal Unit of the Central Utah Project in Utah, on the Paonia Project in Colorado and on the Hammond Project in New Mexico. Reports also have been completed and transmitted to the Secretary of the Interior on the Smith Fork Project in Colorado and Seedskaadee Project in Wyoming. A field draft report has been completed on the Florida Project in Colorado. Reports on estimated impacts on national forests by the Flaming Gorge and Curecanti main river control projects in Utah and Colorado, respectively, have been transmitted to the Secretary of the Interior. Much of the data has been obtained about the Emery County Project in Utah and the Silt Project in Colorado. Field data are being obtained about the LaBarge and Lyman Projects in Wyoming.

7. Kansas River Basin - Kansas

The Department is cooperating with the Kansas State Water Resources Board in a survey of that portion of the Kansas River Watershed that lies in the State of Kansas to develop information on economically feasible upstream water storage opportunities for agricultural and other local uses and for flood prevention purposes. This information is to be used by the State of Kansas in the preparation of water-economic budgets for the use and development of its water resources. It will be used by this Department in connection with the development of work plans for small watersheds under the provisions of the Watershed Protection and Flood Prevention Act. This survey is expected to be completed in the 1960 fiscal year.

8. Yazoo-Mississippi River Basin - Mississippi

In cooperation with the Board of Water Commissioners of the State of Mississippi, work has been started on a survey and investigation of the Yazoo-Mississippi alluvial flood plain and the Yazoo-Tallahatchie River Watershed, which drains into the flood plain below four Corps of Engineers flood control reservoirs. Information is being developed to be used by the Soil Conservation Service in coordinating its watershed and other programs with soil conservation districts and other local organizations, agencies of the Mississippi State Government, and other Federal agencies. The information will be used by the Board of Water Commissioners in planning and administering the physical aspects of water use and management in the Yazoo-Mississippi River basin. Present schedules indicate that the survey will be completed in the fiscal year 1960.

9. Huron River Basin - Michigan

The Soil Conservation Service is cooperating with the Huron River Watershed Inter-Governmental Committee in a survey and investigation of the relationship of agricultural water use to and impact on the

multiple use of land and water in the watershed. Particular attention is being given to the potential of agricultural irrigation and water needs for that purpose and their relationship to maintenance of downstream low-stage flow for other uses. The work on this survey is expected to be completed in the 1960 fiscal year.

10. In addition to those completed or under way, there are prospects for cooperation in surveys and investigations in the watersheds of the Susquehanna River in New York and Pennsylvania, the Tar River and the Neuse River both in North Carolina, the Tombigbee River in Mississippi and Alabama, the Deschutes River in Oregon, the Humboldt River in Nevada, the French-Broad River in North Carolina and Tennessee, and the Lower Arkansas River in Arkansas and Oklahoma.



(c) Flood Prevention

Appropriation Act, 1960 and base for 1961	\$18,000,000
Budget Estimate, 1961	<u>15,000,000</u>
Decrease (in appropriation for works of improvement in authorized Flood Prevention watersheds)	<u>-3,000,000</u>

PROJECT STATEMENT

Project	1959	1960 (estimated)	Decrease	1961 (estimated)
Works of improvement a/	\$16,530,370	b/\$18,000,000	-\$3,000,000(1)	\$15,000,000
Total employee health benefit costs (P.L. 86-382)	[- -]	[- -]	[- -]	[46,000]
Subtotal	<u>16,530,370</u>	<u>18,000,000</u>	<u>-3,000,000</u>	<u>15,000,000</u>
1958 appropriation available	:	:	:	:
in 1959	-1,376,362:	:	:	:
1959 appropriation available	:	:	:	:
in 1960	+2,845,992:	:	:	:
Total appropriation or estimate	<u>: 18,000,000:</u>			

a/ Represents obligations. Applied costs for 1959 are \$15,415,385, and are estimated to be \$20,975,897 in 1960 and \$15,800,000 in 1961. The \$1,114,985 excess of obligations over costs in 1959 reflects, primarily, the timing of installation of structural measures in the several watersheds in future years, for which obligations were incurred in 1959. In 1960, annual installation costs are expected to exceed annual obligations by \$129,995, and in 1961 by \$800,000.

b/ In addition it is estimated that the \$2,845,992 available from prior year balances will be obligated.

DECREASE

(1) A decrease of \$3,000,000 in the appropriation for works of improvement in the authorized flood prevention projects. The appropriation requested in 1961 is the same amount proposed in the 1960 Budget Estimate and is adequate to enable the Department to continue its total conservation efforts at a comparatively high level. It will permit the work of installing watershed improvement measures to go forward at substantial rates in each of the eleven authorized watersheds, as shown on the attached table.

Distribution of Funds to Watersheds

Watershed	1959 Obligations	Total Availability, 1960			1961 Budget Estimate
		Total Available	Balance Carried Forward from 1959	1960 Appropriation	
Buffalo Creek, New York	\$353,152	\$362,583	\$31,583	\$331,000	\$276,000
Colorado (Middle), Texas	1,055,213	2,959,362	988,362	1,971,000	1,626,000
Coosa, Ga., Tenn.	764,071	823,817	47,817	776,000	640,000
Little Sioux, Iowa, Minn.	1,005,480	954,943	55,943	899,000	741,000
Little Tallahatchie, Miss.	786,511	1,226,135	300,135	926,000	765,000
Los Angeles, Calif.	1,320,471	1,596,503	231,503	1,365,000	1,084,000
Potomac, Pa., Md., Va., W. Va.	992,217	1,120,539	217,539	903,000	745,000
Santa Ynez, Calif.	205,179	465,571	210,571	255,000	342,000
Trinity, Texas	3,538,062	3,774,946	152,946	3,622,000	2,987,000
Washita, Okla.	4,291,335	4,347,527	12,527	4,335,000	3,579,000
Yazoo, Miss.	2,089,109	2,914,066	597,066	2,317,000	1,915,000
Emergency Measures	129,570	300,000	- -	300,000	300,000
Total	16,530,370	20,845,992	2,845,992	18,000,000	15,000,000

STATUS OF PROGRAM

Current Activities: The Flood Control Acts, as amended and supplemented (33 U.S.C. 701-709), provide (1) for control of floods by mainstream control works for which the Department of the Army is responsible, and (2) for the reduction of floodwater, sediment, and erosion damages, and the prevention of floods by installation of watershed improvement measures for which the Department of Agriculture is responsible. The work of this Department under this item, which is carried on in the eleven watersheds authorized by the Flood Control Act of December 22, 1944, consists of:

- (a) the preparation of detailed subwatershed or subwatershed area work plans which specify the kind of improvements to be installed for flood prevention, their location, and the work schedule,
- (b) the installation of works of improvement, such as diversions, dikes, gully-stabilizing and water retarding structures, debris and desilting basins, floodways, stream-channel improvement, fire protection and woodland improvement measures, etc., to reduce flood, erosion, and sediment damage and retard runoff and control its movement into the main streams, and
- (c) the acceleration of land treatment measures to prevent erosion and protect the structural works of improvement from flood and sediment damage.

Proposed improvements by the Department are correlated with and designed to protect mainstream work by the Corps of Engineers, the Bureau of Reclamation, and others, in addition to providing protection to the watershed lands and property above the mainstream works. The proper and continued maintenance of installed measures is the key to the long-time effectiveness of the watershed improvement programs. Landowners and operators generally maintain conservation and other measures which benefit primarily the lands upon which they are installed. Local units of government have the responsibility to maintain the measures which provide primarily off-site benefits.

Program Assignments

The Soil Conservation Service has general responsibility for administration of the work of the Department of Agriculture authorized under the Flood Control Acts. The Soil Conservation Service and the Forest Service carry out the planning and installation of flood prevention works of improvement and land treatment measures in the authorized watersheds. The Forest Service activities are concerned with (a) all national forests and other lands in the authorized watershed that are administered by that Service, (b) all range land in or adjacent to national forest and used in conjunction with such forests under formal agreement with the landowner, and (c) certain specialized technical assistance on other forest lands within the watersheds. The Soil Conservation Service activities are concerned with all other private and public lands in the watersheds.

Selected Examples of Recent Progress:

Allocation of Funds for Works of Improvement

Funds available for planning and installation of flood prevention works of improvement are allocated between the Soil Conservation Service and the Forest Service as follows:

Agency	1959 Obligations	1960 Funds Available	1961 Estimate
Soil Conservation Service	\$14,306,629	\$18,358,469	\$12,965,000
Forest Service	2,094,171	2,187,523	1,735,000
Emergency Measures	129,570	300,000	300,000
Total	16,530,370	20,845,992 ^{a/}	15,000,000

^{a/} Includes \$2,845,992 unobligated balances brought forward from fiscal year 1959.

The following table provides a breakdown by watersheds of the allocations for the fiscal years 1960 and 1961.

Watershed	1960 Funds Available			1961 Budget Estimate		
	Agency Distribution			Agency Distribution		
	SCS	FS	Total	SCS	FS	Total
1. Buffalo Creek, N.Y.	\$358,783	\$3,800	\$362,583	\$273,000	\$3,000	\$276,000
2. Colorado (Middle)						
Texas	2,959,362	--	2,959,362	1,626,000	--	1,626,000
3. Coosa, Ga., Tenn.	774,782	49,035	823,817	614,000	26,000	640,000
4. Little Sioux, Iowa						
Minn.	954,943	--	954,943	741,000	--	741,000
5. Little Tallahatchie,						
Miss.	978,817	247,317	1,226,134	565,000	200,000	765,000
6. Los Angeles, Calif.	609,163	987,340	1,596,503	300,000	784,000	1,084,000
7. Potomac, Md., Va.						
Pa., W. Va.	1,076,555	43,984	1,120,539	711,000	34,000	745,000
8. Santa Ynez, Calif.	272,600	192,972	465,572	205,000	137,000	342,000
9. Trinity, Texas	3,774,946	--	3,774,946	2,987,000	--	2,987,000
10. Washita, Okla.	4,345,027	2,500	4,347,527	3,576,000	3,000	3,579,000
11. Yazoo, Miss.	2,253,491	660,575	2,914,066	1,367,000	548,000	1,915,000
12. Emergencies ^{a/}	300,000	--	300,000	300,000	--	300,000
Total	18,658,469	2,187,523	20,845,992	13,265,000	1,735,000	15,000,000

^{a/} Under authority of Section 216 of the Flood Control Act of 1950, not to exceed \$300,000 may be expended each fiscal year for emergency measures when a fire, flood or any other natural element or force has caused a sudden impairment of the watershed. This amount is not included in the amounts proposed for distribution to the individual watersheds. However, any balances not needed for

emergency measures as provided by the Act are distributed later in the year to those of the 11 authorized watersheds where the greatest need exists and where the local people have provided easements and rights-of-way to permit installation of additional works of improvement.

Watershed Work Plans and Improvement Measures

The Department, in cooperation with soil conservation districts, watershed organizations and other local, private, and public agencies, is planning and installing watershed improvement measures in all eleven of the authorized watersheds. In order to provide consistency between the Flood Prevention program and the Watershed Protection program (P.L. 566, 83rd Congress, as amended) of the Department, which have similar objectives, the planning criteria, economic justifications, local sponsorship requirements, cost-sharing, structural limitations and other procedures and policies used in the Flood Prevention program have been adjusted to generally parallel those of the Watershed Protection program insofar as possible within the provisions of the Flood Control Acts.

As of June 30, 1959, work plans had been developed for 17,261,243 acres or about 56 percent of the 30,997,037 acres in the authorized portion of the watersheds. During 1959 work plans were developed for 8 subwatersheds and one area within a subwatershed. An additional 76 work plans were in the process of being prepared or revised as of June 30, 1959.

The following table lists some of the major watershed works of improvement which were installed cooperatively by the Department agencies and local cooperators in the fiscal year 1959 and total measures on the land on June 30, 1959:

Table I

Type of Improvement	Unit	1959 Accomplishments (Actual)		Total on the Land 6/30/59
		With Flood Prevention Funds	With Conservation Operations Funds	
<u>Structural Measures:</u>				
Floodwater retarding structures	No.	161	-	744
Stab. & Sed. Control Strs.	No.	29	-	686
Silt and debris basins	No.	7	-	398
Outlet construction	Miles	-	-	11
Grassed waterways	Acres	37	-	110
Channel stabilization	Miles	14	-	218
Channel improvement	Miles	84	-	1,112
Diversion construction	Miles	2	-	91
Levees and dikes	Miles	-	-	31
Channel excavation	Miles	-	-	20
Roadside erosion control	Miles	125	-	3,125
Revegetation	Acres	50,959	-	347,834
<u>Land Treatment Measures:</u>				
Contour farming	Acres	52,466	72,238	2,288,035
Cover Cropping	Acres	82,420	102,876	874,044
Crop residue utilization	Acres	123,026	168,812	1,655,713
Diversion construction	Miles	210	436	7,274
Erosion control str.	No.	1,028	108	8,776
Pasture planting	Acres	75,257	91,640	1,281,543
Pond construction	No.	1,262	2,655	65,600
Range seeding	Acres	19,536	38,188	383,216
Strip cropping	Acres	860	2,278	52,806
Stubble mulching	Acres	3,254	10,085	113,470
Terracing	Miles	1,076	1,649	68,829
Tree planting	Acres	18,050	9,949	211,063
Waterway development	Acres	1,763	1,858	52,473
Wildlife area improvement	Acres	2,427	4,293	271,421
Woodland protection	Acres	7,461	20,736	383,603
Improvement cutting	Acres	8,501	8,941	215,422
<u>Fire Protection:</u>				
(a) Fire control trails and breaks	Miles	15	-	629
(b) Structures	No.	3	-	126
(c) Heliports and Helispots	No.	-	-	366
(d) Mobile equipment	No.	7	-	23
(e) Perm. radio installations	No.	6	-	199
(f) Telephone lines	Miles	-	-	223

Progress in Individual Authorized Watersheds

There follows a description of the work being conducted in each of the eleven authorized watersheds and progress being made. In each instance the total estimated Federal cost has been revised based on 1958 Engineering News Record Index.

Buffalo Creek Watershed, New York

Total estimated Federal cost	\$5,044,731
Total obligations through June 30, 1959	3,239,402

This flood prevention project is located in the extreme western part of the State and covers an area of 437 square miles in Erie and Wyoming Counties, including 21 square miles within the City of Buffalo. The principal purpose of the project is to reduce siltation in the Buffalo River portion of Buffalo Harbor by controlling streambank erosion and accelerating the installation of land treatment measures on the individual farms within the watershed. Most of the sediment comes from the eroding banks of the principal streams flowing into Buffalo Harbor.

The principal structural measures being installed to control erosion include bank sloping and riprapping the lower portion of each of the eroding banks and vegetating the upper portions. Grade control sills are installed to reduce degradation of the stream bed. Low training dikes are used to prevent overbank scour. Ox-bow cutoffs are installed if the resulting channel is less costly to build and hold. As of June 30, 1959, the structural measures installed consisted of 41.7 miles of channel improvement, 48.8 miles of streambank stabilization, 212,602 cubic yards of fill embankment, 526,910 cubic yards of excavation, and 206,255 square yards of stone riprap. A construction contract of approximately \$120,000 was completed on East Cazenovia Creek during the fiscal year 1959. Construction is expected to begin on West Cazenovia Creek in the 1960 fiscal year.'

Urbanization and an ever-expanding network of roadways in the watershed are acting to increase surface runoff with resulting surface and channel erosion. This is in large measure offset by increases in number of surface storage reservoirs for wildlife, a shift into "grass farming" on dairy farms, and an increasing amount of reforestation which increases infiltration. Progress in establishment of land treatment measures has been good. As of June 30, 1959, 1,468 of the 3,890 rural landowners had become district cooperators and had applied 5,448 acres of pasture planting, 10,110 acres of permanent hay, 9,825 acres of tree planting, 2,423 acres of wildlife improvement, 442 farm ponds, and 37.3 miles of open ditches.

That the project installations are effective is evidenced by the fact that during a ten-year period prior to World War II the Corps of Engineers annually dredged approximately 236,500 cubic yards of silt from Buffalo Harbor while from 1955 through 1959 they have averaged dredging only 104,000 cubic yards per year. In addition to the reduced siltation, the on-site benefits are apparent. Many banks that formerly lost 3,000 to 5,000 cubic yards of earth in eroding 50 to 60 feet in one season have been completely stabilized by the application of stone riprap and vegetation.

Middle Colorado River Watershed, Texas

Total estimated Federal cost \$34,952,807
Total obligation through June 30, 1959 6,609,595

The authorized area in this project includes approximately 4,613,000 acres of the middle section of the Colorado River of Texas, comprising 14 sub-watershed areas used for purposes of work plan development. The principal problems are floodwater and sediment damage to agricultural lands, practically all of which are privately owned.

Good progress is being made in the application of land treatment measures. Of the 8,086 operating farm and ranch units, 5,158 are under agreement with the local soil conservation districts and 4,124 have basic conservation plans developed comprising 2,649,000 acres. Approximately 76 percent of the total watershed area is under district agreements.

As of June 30, 1959, a total of 61 floodwater retarding structures had been installed or contracts awarded for construction. Contracts were awarded for 8 floodwater retarding structures during the 1959 fiscal year. During the fiscal year 1960, 30 additional structures and approximately 30 miles of channel improvement are scheduled for construction. The City of Brady is interested in the development of a municipal water storage reservoir on Brady Creek in which the Department may participate.

Delay in securing needed land, easements, and rights-of-way during 1959, together with local consideration given the proposed Brady Reservoir, prevented the contracting of some of the work scheduled for 1959. It is anticipated that necessary land, easements and rights-of-way for work scheduled for the 1960 fiscal year will be obtained by the local people. Satisfactory progress has also been made by the local people in setting up legal means by which they can assure operation and maintenance of installed structural measures.

Coosa River Watershed, Georgia and Tennessee

Total estimated Federal cost \$ 9,313,801
Total obligations through June 30, 1959 3,328,598

The authorized area of this watershed covers approximately 1,339,400 acres in northwestern Georgia with a small portion of this lying in southeastern Tennessee. It has been divided into 17 subwatersheds for planning and applying the works of improvement. The principal problems in the watershed are erosion, floodwater and sediment damage to agricultural lands, county roads and fixed improvements. Approximately 85 percent of the watershed area is privately owned land and 130,350 acres are included in National Forests. The watershed project is sponsored by four soil conservation districts. Subwatershed work plans had been prepared and works of improvement were being installed in 8 of the 17 subwatersheds comprising 545,313 acres as of June 30, 1959.

The installation of land treatment measures has progressed well in most of the subwatersheds. Of the 4,877 farmers in the area, 2,715 had become district cooperators by June 30, 1959. As of this same date they had applied 267 miles of terraces, seeded 29,807 acres to pasture, planted protective vegetation on 5,518 acres of critical areas, planted 5,312 acres of other perennial types of vegetation, built 297 farm ponds, seeded 6,952 acres of pasture improvement, and planted trees on 654 acres.

As of June 30, 1959, 39 of the planned 111 floodwater retarding dams had been completed and eight were under construction and contracts awarded on 10 additional. Stream channel capacity improvements had been completed on 26 miles of creek channel at a cost of \$80,657 and four additional miles were under contract. Seven miles of clearing and snagging had been completed to improve creek channel hydraulic characteristics at a cost of \$16,000. The total estimated Federal cost of the planned structural measures is \$2,912,575. Easements and rights-of-way have been obtained by the watershed directors, district supervisors, county commissioners, farm leaders and other local people for 72 structure sites.

Even though not all of the land treatment and structural measures have been established, the effectiveness of the project installations has been proven. Several times since the first two structures were completed in 1955 in the Pumpkinvine subwatershed, four and five-inch rainstorms have occurred which would have, before the project installations, produced extensive flooding and damages. The channel below the structures on each occasion ran not over two-thirds full and flood plain damages were prevented. In June 1959, 4.3 inches of rain fell in $1\frac{1}{2}$ hours in the drainage areas behind three structures but no appreciable floodwater or sediment damages occurred to the flood plain below. Similar rainstorms also occurred during May 1959 in the Settingdown Creek subwatershed where 15 floodwater retarding structures had been completed and 75% of the planned land treatment applied but no appreciable floodwater or sediment damages occurred in the flood plain due to effectiveness of these project installations.

Little Sioux Watershed, Iowa and Minnesota

Total estimated Federal cost	\$29,016,815
Total obligations through June 30, 1959	10,075,168

The Little Sioux Watershed is about 135 miles long and 50 miles across at its widest point. It includes 2,880,000 acres extending from southwest Minnesota to a point of confluence with the Missouri River approximately midway between Sioux City and Omaha. The uplands of the watershed located to the south of Clay and Osceola Counties, Iowa, make up the area of 1,740,800 acres authorized for flood prevention assistance. The soils are of loessal origin. Wind blown materials are commonly found in depths of 25-50 feet and frequently 100 feet or more. Both sheet and gully erosion are severe problems in this area. Gullies of 20-40 feet in depth are common and in several instances gullies have developed to depths of over 50 feet. The "valley floor" sections of many of the small tributaries are being rapidly destroyed by the severe gully erosion. This damage seriously affects the agricultural economy of the watershed since the areas being destroyed are the most fertile. A three-hundred square mile area of so-called Missouri River bottomlands is frequently

damaged by heavy sediment loads produced in the upland tributaries and by frequent flooding.

Eight soil conservation districts are principally concerned with the execution of the authorized program, but four other soil conservation districts of Iowa have some interest in the program and are represented on the Little Sioux Works Committee which provides overall guidance for execution of the program and establishes priorities for assistance.

Forty-two subwatershed work plans, comprising 80,729 acres had been approved as of June 30, 1959. Eight of these covering 12,872 acres were approved during the fiscal year 1959 and two additional interim work plans totalling 7,740 acres were prepared during the same period. Work plans were being developed in seven other subwatersheds at the end of the fiscal year 1959.

Good progress is being made in the installation of structural measures for flood prevention required by the work plans as shown in the tabulation below:

Structural Measures installed for Flood Prevention	Unit	Applied in Fiscal Year 1959	Applied Through Fiscal Year 1959
Floodwater retarding structures	No.	19	160
Stabilizing structures	No.	16	290
Grassed waterways	Acre	37	110
Channel improvement	Mile	2	63
Diversions	Mile	1	15
Dike construction	Mile	0	15
Dike construction	C.Yd	0	247,522
Floodway	Mile	0	10
Floodway	C.Yd	0	286,502
Detention terraces	Mile	53	672
Earthwork	C.Yd.	511,451	6,565,489
Reinforced concrete	C.Yd.	1,382	21,913

As of June 30, 1959, there were 3,636 landowners cooperating with their soil conservation districts in the application of the land treatment measures called for in the subwatershed work plans and 2,679 of these had developed basic conservation plans covering 507,708 acres. These cooperators had as of this same date constructed 2,982 miles of terraces and developed 3,697 acres of waterways which are the most needed land treatment measures for sheet and gully erosion control called for in the work plans.

The effectiveness of the project installations has already been demonstrated. In May, 1959, rains totalling 10 to 12-inches were experienced over most of the authorized area. Concentrations of five to six inches in 24 to 28-hour periods were recorded at several locations. In a few instances emergency spillways of detention-type structures were put into use, but most of the flood runoff was contained behind the structures and damages below prevented. Both basin and standard level-type terraces located in areas of heaviest rainfall concentrations functioned very well. Very little or no terrace damage occurred. There has been an increased interest in basin terraces in the past two years or so. Weather conditions over the past year have permitted farmers to improve vegetative cover on the basin terraces.

In the 11 years since the first subwatershed project was completed, very little of the District's watershed maintenance funds have been required for repair of watershed improvements.

Local county and municipal governments continue to give strong support to the Little Sioux Program. Agricultural Stabilization and Conservation Committees, at both State and county levels, have continued to support the program, and in many instances ACP funds have been set aside especially to assist with permanent type practices as suggested by soil conservation districts.

Little Tallahatchie River Watershed, Mississippi

Total estimated Federal cost	\$16,107,016
Total obligations through June 30, 1959	6,424,818

This watershed project comprises some 963,977 acres in north central Mississippi including the 98,250 acre Sardis Reservoir and 99,000 acres of forest lands in the Holly Springs National Forest, the latter administered by the Forest Service. The sponsor of the project is the Tallahatchie River Soil Conservation District which is organized as a watershed district. The principal problems in the watershed are floodwater and sediment damage to agricultural lands. About 45 percent of the watershed is forest land, 25 percent is in crops, nine percent in pasture, 14 percent idle land, and seven percent in miscellaneous uses.

As of June 30, 1959, land treatment measures estimated to cost over \$9,000,000 including critical area treatment, had been planned for 217,000 acres of cropland, 393,000 acres of woodland, and 76,000 acres of pasture. The conversion of 120,000 acres of idle land to agricultural use is also planned. Of the 6,453 operating units in the watershed, 4,325 were cooperating with the soil conservation district in the establishment of land treatment measures and 3,157 had developed basic conservation plans. About 40 percent of the needed land treatment measures including conservation crop rotations, pasture planting, critical area treatment, and roadside erosion control had been established by June 30, 1959.

The structural measures for flood prevention estimated to cost \$9,190,000 are being installed in conformance with the subwatershed work plans. As of June 30, 1959, of the 150 floodwater retarding dams needed, 10 had been installed; of the 1,217 miles of channel improvement needed, 281 miles had been installed; of the 53 debris basins needed, all had been installed.

The Lukesasper Channel Project completed in April 1959 after five years effort on the part of the landowners and local sponsors is a good example of the kind of channel improvements being accomplished in the smaller tributaries of the Little Tallahatchie project. Lukesasper channel is a small tributary which rises in the vicinity of Blue Mountain in Tippah County and flows south for seven miles to the confluence with the Little Tallahatchie River at New Albany, Mississippi, draining 16,726 acres. The Lukesasper Drainage District had constructed a channel in 1914 to

drain the area but the channel was not maintained and the lack of a suitable land treatment program in the watershed caused the channel to rapidly fill up with sand and silt. An intensive land treatment program in the watershed had been underway for four or five years when the local sponsors in September 1956 requested technical and financial assistance in installing needed structural measures to alleviate floodwater and sediment damages in the watershed.

Service technicians prepared plans and specifications for the improvement of Lukesasper channel and a trust fund agreement was executed with the sponsors and construction got underway in October 1958. The work was completed in April 1959 and included 92,000 cubic yards of channel excavation and 3.8 miles of channel clearing at a Federal cost of \$30,456 and local cost of \$5,380 cash plus the furnishing of easements and rights-of-way, legal fees, etc. The average annual benefit of the channel improvements is estimated at \$14,977 while the average annual cost will approximate only \$2,017. No flood damages have occurred since this work was completed benefitting 1,494 acres of bottomland on 50 farms.

Los Angeles River Watershed, California

Total estimated Federal cost	\$21,444,869
Total obligations through June 30, 1959	10,650,045

This flood prevention project provides for the installation of works of improvement within the 536,960 acre Los Angeles River Watershed to supplement flood control improvements on the principal river channels and tributaries as planned under the programs of the Corps of Engineers and various local agencies. A total of 145,000 acres of the watershed is in the Angeles National Forest and the remainder is privately owned.

The work on non-Federal land is planned and constructed cooperatively by the Soil Conservation Service, the Los Angeles County Flood Control District, and other local and state agencies, including the City of Los Angeles and the San Fernando Valley Soil Conservation District. The watershed is characterized by short duration and relatively high intensity rainfall. Flood flows are of high peak and short duration. Watershed erosion is high with sediment from the steep watershed canyons being transported and deposited on the relatively flat alluvial slopes of the valley floor. Channel definition across the valley to the Los Angeles River is very poor and of inadequate size, in most cases, for even normal winter runoff. When the project was authorized about 22 percent of the area of 116,065 acres were devoted to agriculture and grazing use. In recent years there has been a material increase in urban development of the area with a corresponding decrease in agricultural use.

Because of the rapid urban development in the San Fernando Valley, practically all of the land treatment work today consists of street drainage and storm drains planned and constructed entirely by local agencies. Previously, the planning and installation of farm land treatment measures was carried out under the regular Conservation Operations appropriation item on that portion of the watershed within the San Fernando Valley Soil Conservation District.

Structural measures completed to June 30, 1959 include 17 miles of stream-bank and channel stabilization, 24 miles of channel capacity improvement, four miles of subwatershed waterway improvement, seven stabilizing and sediment control structures, and one desilting basin. A construction contract providing for the improvement of approximately 1.1 miles of channel is scheduled to be completed in January 1960. A contract for professional engineering services was under way on June 30, 1959 for detailed designs, plans and specifications for the improvement of the first unit of Limekiln Creek, involving approximately one mile of concrete lined channel. The preparation of final plans and specifications for improvement of the fourth unit of Bull Creek was underway at the close of the fiscal year 1959.

The basis of cooperation for installing works of improvement on the project, on other than Federal lands, requires local cooperating agencies to furnish all rights-of-way, arrange for and bear the entire cost of all utility relocations and replacement of existing improvements, operate and maintain the completed works and to pay fifty percent of the cost of construction. Total local expenditures have amounted to nearly twice the Federal expenditures. All local cooperating agencies are extremely well organized and are efficiently meeting their obligations relative to rights-of-way, contributed funds and operation and maintenance.

Storms to date, subsequent to the completion of the various subwatershed waterway improvements, have served to prove the adequacy and effectiveness of the measures installed. Storms of the magnitude contemplated in designing the works of improvement have not occurred subsequent to the completion of all the various projects. However, evidence indicates that where flows formerly over-topped natural channels and resulted in considerable water and deposition damage to agriculture and urban development these flows are now being safely carried to the Los Angeles River and various flood control basins through channel works of improvement constructed under the program.

The Santa Anita channel stabilization project in the Angeles National Forest part of the watershed continues to be the major undertaking of the Forest Service. Early in the fiscal year 1959 construction was begun on the first of the 70 crib dams or channel barriers planned and by the end of the year four dams had been completed and two more were under construction. Access roads were built as needed for the construction work.

During the fiscal year 1959 the propagation of plants for watershed cover improvement was continued at the Oak Grove Nursery and seed was collected from both native and exotic plants. Since drought conditions prevailed for the entire year, very little planting was done on the cover improvement program except at the site of the Monrovia Burn which was reseeded immediately after the fire.

The fire preplanning work, consisting of field checking all fire control facilities, posting signs, mapping, preparing field notes, and constructing fire lanes was continued. Also low level oblique photographs of the high-value front country area were obtained which will be very beneficial in future checking of preplanning work and will be invaluable for use in actual

fire camps. In addition, work was underway at the close of the fiscal year 1959 to delineate power lines and other hazards to aerial firefighting operations by fixed-wing aircraft during periods of low visibility. Also during the 1959 fiscal year housing facilities were improved by the completion of five three-bedroom homes and another was under construction. Arrangements were also underway for use of the Veterans Administration site at San Fernando

Aerial control techniques continued to assist materially in the control of fires in the initial stages. Excellent examples of this activity include the Tujunga fire of July 19, 1958, the Ladybug fire of October 19, 1958, and the Lowell fire of November 1, 1958. All three of these fires had the potential of assuming major fire proportions without assistance from the air tankers. Air tankers also aided considerably in stopping a six-acre fire threatening the Chilao campground on June 24, 1959. The helitack program was continued with good results. Considerable experience was gained in the accurate placement of small loads (35 gallons each) of borate solution on hot spots and slopovers. This type of attack is very effective on small fires especially those caused by lightning that are not in the tall timber areas. Also, helijumpers assured control of one lightning fire and held the burned area to one spot. Trained members of the helitack crew operated very effectively in aerial operations on small fires, contributing greatly to accident-free operations and making very worthwhile savings in fire suppression costs.

The 1958-59 fire season showed the results of intensive planning and training, especially in fire prevention work. There were nine statistical fires (five smoker, one incendiary, and three miscellaneous). The most serious fire in the Los Angeles River watershed was typical of several problems. The Monrovia fire was started on October 2, 1958 by children playing with matches in an area outside but immediately adjacent to the forest boundary. The fire burned a total of 11,953 acres, suppression costs were estimated at \$450,000, and watershed damage in excess of \$6,000,000 occurred. Air tankers were very effective in the initial attack on this fire but when their operations closed down due to darkness the fire continued and spread completely out of control. If the air tankers had had another hour of daylight this extremely expensive and damaging fire possibly could have been brought under control.

Potomac River Watershed, Md., Pa., Va., W. Va.

Total estimated Federal cost	\$18,305,950
Total obligations through June 30, 1958	3,124,869

The authorized project area includes 4,205,400 acres of the Potomac River watershed in Maryland, Pennsylvania, Virginia and West Virginia. Five subwatershed work plans have been approved including 385,024 acres and the installation of works of improvement was underway in four of these as of June 30, 1959. Installation of works of improvement has been delayed in the fifth subwatershed because local people had not obtained the necessary rights-of-way for construction.

Another work plan was almost completed by June 30, 1959, for the Gap Run subwatershed in Virginia and operations are scheduled to be underway early in the 1960 fiscal year. This is a small watershed including 5,100 acres in the eastern portion of Rockingham County. The primary problems in the watershed are the flooding and swamping of the small community of Berrytown. Two preliminary investigations were also underway at the close of the fiscal year 1959 to determine the feasibility of flood prevention projects in North River and Upper North Fork subwatersheds of Virginia. There is also the possibility of the development of a subwatershed project in the Passage Creek watershed of Shenandoah County, Virginia, where there is considerable local interest.

In the four subwatersheds installing works of improvement as of June 30, 1959, the installation of land treatment measures was on schedule in the South Fork of Virginia. In West Virginia the installation of land treatment was behind schedule in the Warm Springs Run subwatershed due to the general discontinuance of farming in the area. However, such non-use of land had resulted in considerable natural reforestation which was improving the overall hydrological condition of the watershed. About 60 percent of the needed land treatment measures had been installed in the New Creek-Whites Run subwatershed. Land treatment was just beginning as of June 30, 1959 in the South Fork subwatershed of West Virginia since the project was not authorized until January 5, 1959.

Current plans for the subwatersheds provide for the installation of about 60 floodwater retarding structures and at least four other sites are being evaluated. Sediment producing areas are to be stabilized by tree planting, channel improvement, and streambank and roadside erosion control. As of June 30, 1959, 20 of the floodwater retarding structures had been completed and construction was underway on three more. Approximately seven miles of channel improvement is scheduled for construction early in the fiscal year 1960.

Forestry accomplishments by the Forest Service to June 30, 1959, include tree planting on 1,674 acres (60 acres critical area plantings), 34 miles of logging road stabilization, 6,235 acres of woodland grazing control, 382 forest management plans prepared and 13,692 acres of hydrologic tree stand improvement.

Santa Ynez River Watershed, California

Total estimated Federal cost	\$4,175,400
Total obligations through June 30, 1959	2,158,542

This project covers 576,000 acres. The project is sponsored by the Lompoc Soil Conservation District. Flood prevention works of improvement are currently being installed in the westerly portion of the Santa Ynez River Basin. Essentially all of the subwatershed lands within this 88.7 square mile area are privately owned. Flood flows from deeply entrenched canyons debauch on to fertile intensively cultivated lands used for vegetable and flower seed production. Each flood flow produces sheet and gully erosion on lands outside of the flood plains. Structural measures are being installed to

prevent degradation of entrenched gullies and to confine flood water to improved channels across the flood plains. Land treatment measures, including fire prevention, are being applied to prevent erosion and to improve soil fertility.

As of June 30, 1959, the installation of planned land treatment measures estimated to cost \$175,000 was well advanced on 14,200 acres of cropland and 42,500 acres of range land. Of the 267 farmers in the subwatersheds, 198 were district cooperators and 198 basic farm plans had been prepared. More than 94 percent of the land treatment measures were applied, most significant of which are 38 miles of diversion construction, 395 drop spillways constructed, cover cropping on 10,454 acres, rotation grazing on 42,807 acres, and 153 ponds constructed. The Forest Service has constructed fire trails and other works for fire prevention on National Forest lands located in the headwaters of the Santa Ynez River Basin.

The sponsors, townspeople, and farmers are well organized. The Lompoc Soil Conservation District Board of Directors has negotiated a total of 32 contracts for flood prevention works of improvement covering work for which they were reimbursed by the Federal Government. Land treatment work has been given highest priority for Agricultural Conservation Program assistance and will be installed well ahead of schedule.

Easements and rights-of-way valued at \$97,365 have been recorded for 46 parcels of land covering all of the flood prevention works installed to date. These measures include 109 stabilization and sediment control structures, three silt and debris basins, three miles outlet construction, six miles channel stabilization, ten miles diversion construction, 54,719 cubic yards of levees and dikes, three miles flood ways, and 127 acres of re-vegetation for stabilization of critical areas. The above works of improvement involve a Federal cost of approximately \$897,082 and non-Federal cost of approximately \$22,600 exclusive of rights-of-way. The construction of the flood prevention measures has changed the economy of the area by permitting the growing of winter crops of commercial flower seed, vegetables, and orchards.

Precipitation on the watershed during fiscal year 1959 was about 50 percent normal, with no intense storms. The network of recording gages was continued by California State Department of Water Resources.

Fires in the watershed were held to small acreages during the fiscal year 1959. One lightning fire was started in Gibraltar subwatershed, but it burned less than one acre. Two fires occurred in the watershed of Cachuma Reservoir below Gibraltar but neither burned over one acre. Four fires occurred outside Los Padres National Forest. The intensified fire protection program of the project functioned effectively and no serious erosion hazard was created, although one "controlled burn" on a ranch outside the National Forest could have resulted in considerable erosion immediately adjacent to Cachuma Lake if a severe storm had occurred.

During fiscal year 1959, 11½ miles of foot trails were reconstructed. Fire pre-attack planning was done on about 39,000 acres, including nine miles of

firelanes and nine helispots. Two and one half miles of telephone lines were constructed, two miles reconstructed and 50 miles maintained. Site plans for buildings at Los Prietos were drawn up and reviewed, and the Tanker-Garage-District Warehouse readied for contract construction early in FY 1960 with funds to be carried over from FY 1959. Five miles of roads were reconstructed on Santa Ynez River Road and four miles of survey line run for a road beyond Gidney Creek.

Trinity River Watershed, Texas

Total estimated Federal cost	\$93,436,914
Total obligations through June 30, 1959	20,834,943

The authorized area in this watershed project includes the upper 8,424,260 acres of the Trinity River Watershed, comprising 54 subwatersheds designated for work plan development. The principal problems are floodwater and sediment damage to agricultural lands. Practically all of the agricultural land is privately owned.

Land treatment measures are being applied in conformance with the subwatershed work plans. Of the 41,745 operating farm and ranch units in the watershed area, 26,333 are currently under district agreement as of June 30, 1959, accounting for 5,327,885 acres. Basic conservation plans had been developed on 18,338 units, including a total of 3,735,652 acres. District cooperators represent 63 percent of the total farm and ranch operators. They are co-operating with 21 soil conservation districts sponsoring and serving the watershed. As of June 30, 1959, district cooperators had applied 497,443 acres of cover cropping, 30,247 acres of range seeding, 713,437 acres of pasture planting, 21,953 miles of terracing, 1,508 miles of diversion construction, 23,143 farm ponds, and 33,371 acres of waterway development.

As of June 30, 1959, 242 floodwater retarding structures had been completed, were under construction, or contracts had been awarded for construction. Forty-one of these were constructed during the 1959 fiscal year. During the 1960 fiscal year 54 floodwater retarding structures and 14 miles of channel improvement are scheduled for construction. Good progress has been made by the local people in the establishment of legal means through which they can carry out their responsibilities in assuring operation and maintenance on installed structural measures and in securing needed land, easements and rights-of-way for future construction.

The effectiveness of the 138 installed detention structures, supplementing applied land treatment during the heavy spring rains of 1957, when as much as 42 inches fell during the period April 19 to June 3, has continued to be a strong topic of conversation throughout the area. Damages to partially completed structures were comparatively small in comparison to their contribution to protection of downstream areas. It was estimated that the 138 structures installed prevented floodwater and sediment damages in excess of one million dollars.

Washita River Watershed, Oklahoma and Texas

Total estimated Federal cost	\$54,299,100
Total obligations through June 30, 1959	20,083,662

The Washita River watershed includes 7,961 square miles and is divided into 64 subwatersheds for work plan development, local participation and operation. About 94 percent of the authorized watershed area is in Oklahoma and six percent or 301,400 acres is in northeastern Texas. The latter was authorized in July, 1959, for the installation of structural measures, and 10 floodwater retarding structures are scheduled for construction there during the 1960 fiscal year. The primary problems are erosion on the uplands and frequent flooding of 265,000 acres of bottomland along the tributaries and 112,000 acres on the main stem of the Washita River. The program consists of the reduction of soil erosion, floodwater, and sediment damages through a coordinated program of land treatment and structural measures. In addition, storage for irrigation, recreation, and municipal water uses are included where local people provide funds for the added cost.

There are local cooperating agencies such as watershed associations and soil conservation districts promoting the activities in each watershed. Guidance is furnished in priorities of work by overall leadership in the watersheds through the Washita River Flood Prevention Council. The Council is made up of members of the boards of supervisors of each district and the officers and directors of the watershed associations concerned.

Land treatment accomplishment has been outstanding over much of the Washita Watershed. In the Upper Washita Soil Conservation District alone, some 22,325 acres of range seeding has been done during the fiscal year 1959. This makes 88,571 acres "now on the land" in the District. In addition, 201 stock ponds and 322 miles of terraces had been constructed, 60,773 acres of range were being properly used, 150 waterways had been built, and 17,906 acres of cover crops were applied--all in the Upper Washita District in the fiscal year 1959 alone. Other soil conservation districts are reporting similar accomplishments.

The application of the practices reflect the determined efforts of the many agencies and groups to keep the land treatment phase of watershed work ahead of construction. The soil conservation district's governing bodies are rendering excellent service in this phase. An ample number of grass seed drills have been made available to cooperators to get the range seeding job done quickly. Very high quality seed stock is kept in abundant supply by the various governing bodies. Bermuda spriggers, fertilizer spreaders, brush cutters, land levelers and other conservation equipment are abundantly made available to the cooperators by the districts. The Agricultural Conservation and Stabilization Committees in the various counties have placed added emphasis on the watershed treatment program and their efforts have materially helped get conservation on the land. Other agencies through their programs have been most helpful.

An effective gully control program was installed during the fiscal year 1959 on some watersheds. Silt contributing gullies were treated by sloping the sides to a 5:1 slope and grassing the disturbed areas to bermuda grass,

native grass or Kings Ranch bluestem. The establishment of these practices on the various watersheds has resulted in a great reduction of soil loss, has increased the infiltration rate of the rainfall into the soil, and has materially reduced the siltation on bottomlands downstream. Approximately 65 percent of the Washita River watershed drainage area is under farm conservation plan and agreement with the local soil conservation districts. All watersheds having structural measures installed have a minimum of 75 percent of the planned practices applied where they are considered to be large silt contributing sources. During fiscal year 1959 construction of 106 structures was in progress on 15 subwatersheds.

Five subwatershed work plans were presented to the sponsoring agencies for their approval in fiscal year 1959. All were approved. The upper Washita subwatershed with a total area in Oklahoma and Texas of 471,730 acres was presented to the various sponsoring agencies on June 25, 1959. All easements and rights-of-way have been cleared on the 24 flood detention sites on the Oklahoma side. The easement drive on this watershed was one of the best organized efforts made on any watershed in this area. The soil conservation district supervisors took the leadership and within a period of two months all easements were in hand. The sponsoring agency has allocated some \$2,000 to move wells, houses, etc., on the watershed. The County Commissioners will rebuild and relocate roads involved in seven of the sites.

State agencies, such as the State Soil Conservation Board, Board of County Commissioners, State Highway Commissioners, and others have participated in developing work plans and cooperated in the installation of land treatment and structural measures in carrying out the program. Boards of County Commissioners have cooperated in relocating roads, moving bridges, and otherwise adjusting the county road system to conform to the watershed work plan.

On May 25 and 26, 1959, flood producing rains occurred on a number of the watersheds. Panther, Kiowa and Whiteshield Creeks received rains of from 6 to 10½ inches over a 9-hour period, with intensities reaching 1.27 inches in seven minutes. Flood producing rains also occurred on Sandstone, Beaver Dam, Sergeant Major, Nine Mile, and Barnitz during the same period. Some flooding occurred on Sandstone, Panther and Barnitz; however, farmers and ranchers were enthusiastic in their praise of the flood prevention program on the treated watersheds. One landowner of Hammon reported that the structures on Kiowa Creek prevented the total loss of 100 acres of wheat for him. He harvested 37 bushels to the acre on this tract. Another landowner on Panther Creek gave credit to two structures above his land for preventing complete destruction of crops on 60 acres of bottom land. Not one acre of wheat was lost on Barnitz Creek due to flooding. Nine Mile and Kiowa Creek overflowed less than 50 acres. Beaver Dam and Sergeant Major Creek never left their channels. Minor floods on Sandstone Creek did very little damage to wheat. Flooding on watersheds such as Soldier (Oak) and Whiteshield and Beaver Creek, where only two small structures are in place, did untold damage. The entire flood plain was covered and crop damage was high.

Six bridges were lost on Whiteshield Creek alone. Some people familiar with the flood of 1934 believe that a greater amount of rain fell during the May 25 and 26, 1959 rains, than the April 3, 1934 rains. They give credit to the treated watershed, the excellent vegetative cover on the rangeland, and the great amount of land treatment on the cultivated land for preventing an even greater flood than the 1934 flood.

Many multiple purpose projects have been entered into, resulting in great benefits to municipalities and individual landowners. Two large municipal water storage facilities had been created by municipalities in cooperation with the Department previous to fiscal year 1959. The construction of two more such municipal water storage facilities are planned for the immediate future.

Stream channel stabilization measures are being carried on by interested landowners at their own expense on the flood plain below the floodwater retarding structures. Previous to the installation of the structural measures, floodwater damage and erosion had made it impractical to carry on work of this kind. Bottomland areas formerly covered with trees, shrubs and perennial weeds are being cleared and the land returned to improved grasses and legumes for the production of high forage crops to be utilized by livestock.

Yazoo River Watershed, Mississippi

Total estimated Federal cost	\$45,499,120
Total obligations through June 30, 1959	11,955,954

The Yazoo River watershed includes 3,222,400 acres, of which 227,975 are publicly owned. The principal problems in the watershed are floodwater and sediment damages to agricultural lands. Approximately 39 percent of the watershed is in forest, 25 percent in cropland, 14 percent in pasture, 13 percent idle land, and 9 percent in miscellaneous use and reservoirs.

The estimated cost of land treatment measures needed for watershed protection is approximately \$23,000,000 and for flood prevention \$6,000,000. As of June 30, 1959, land treatment measures had been planned for 802,000 acres of cropland and 1,246,000 acres of woodland. It was also planned to convert 425,000 acres of idle land to agricultural use. The entire watershed is covered by 16 soil conservation districts. Of the 15,297 farm units in the watershed, as of June 30, 1959, 10,963 were district cooperators and 8,367 had basic farm conservation plans. The major accomplishments in land treatment measures as of the same date include the establishment of 250,572 acres of conservation crop rotations, the planting of 140,000 acres of critical sediment producing areas to grasses, legumes and trees, pasture planting on 220,335 acres, drainage on 124,864 acres, construction of 3,092 miles of diversion ditches and terraces and 1,839 miles of roadside erosion control. During the fiscal years 1957, 1958, and 1959, more than 90,000,000 trees have been planted in the watershed.

As of June 30, 1959, 20 floodwater retarding structures had been completed, 10 were under contract, and 22 more were ready for contracting. There was also completed as of this same date 85 sand and sediment control structures and 635 miles of channel improvement.

Progress in obtaining easements has been very good. Local water management districts have taken the initiative in acquiring easements and in most of the subwatersheds are proposing to purchase the required easements. It is not expected that lack of easements will slow the construction scheduled for the fiscal year 1960.

Emergency Measures

Section 216 of the Flood Control Act of 1950 authorizes the emergency treatment of watersheds impaired by fire or other similar disasters to prevent loss of life or serious flood and sediment damage. Six such watersheds involving 65,225 acres of newly burned forest and rangeland were treated during fiscal year 1959 at a total cost of approximately \$178,140. Local beneficiaries contributed about \$26,840 and the Federal Government financed the remaining \$151,300 from flood prevention funds for "emergency measures."

All of the six areas treated were located in southern California. Approximately 490,600 pounds of rapid growing mustard, rye grass, brome, and other grasses were sown by airplane or helicopter to provide an immediate protective cover over most of the burned acres. The seeding generally was successful. In addition, 1.5 miles of fence were constructed to protect newly seeded areas, and 97 miles of fire control lanes and trails were stabilized to prevent gullying and accelerated sediment production by runoff waters.

Progress in Basic Data Collection

Work was begun by the Forest Service Southern Forest Experiment Station late in the 1956 fiscal year on the collection of basic surface runoff data and erosion conditions as related to slope-forest cover conditions in the Little Tallahatchie and Yazoo watersheds in Mississippi. Information of this nature is badly needed by technicians for the design of adequate and economical structural measures and effective conservation treatment of watershed lands in that area. Stream gaging, and standard and recording precipitation gages were installed, and provisions made for sediment sampling in nine small subwatershed units on comparable soils. Three of these small natural drainage units are located in each of the following cover types: (1) abandoned, actively eroding, formerly cultivated lands, which are reverting forest; (2) depleted upland hardwoods; and (3) loblolly pine planted 20 years ago on eroding abandoned cropland.

This work will be continued until sufficient data have been accumulated to establish patterns from which technicians may make proper determinations as to adequate watershed improvement measures. Data already available to the Experiment Station will also be analyzed in connection with this study.



(d) Great Plains Conservation Program

Appropriation Act, 1960 and base for 1961	\$10,000,000
Budget Estimate, 1961	<u>10,000,000</u>

PROJECT STATEMENT

Project	1959	1960 (estimated)	1961 (estimated)
1. Great plains conservation program:			
(a) Cost-sharing assistance	\$11,279,404	\$7,500,000	\$7,500,000
(b) Technical services and operating expenses	2,455,328	2,500,000	2,500,000
Total employee health benefit costs (P. L. 86-382)	[--]	[--]	[16,000]
Subtotal <u>a/</u>	13,734,732	<u>b/ 10,000,000</u>	10,000,000
1958 appropriation available in 1959	-4,363,852	--	
1959 appropriation available in 1960	629,120	--	
Total appropriation	10,000,000	10,000,000	

a/ Represents obligations. Applied costs for 1959 are \$5,862,955 and are estimated to be \$6,847,774 in 1960 and \$8,000,000 in 1961. The excess of obligations over costs in each year represents, primarily, contracts for cost-sharing entered into for which the conservation practices will not be installed until subsequent fiscal years.

b/ In addition, it is estimated that \$629,120 available from prior-year balances for cost-sharing assistance will be obligated.



STATUS OF PROGRAM

Current Activities: The Great Plains Conservation Program authorized under Public Law 1021, 84th Congress, is carried out in those counties in the ten Great Plains States that are designated by the Secretary as susceptible to serious wind erosion because of their soils, terrain, climate and other factors. Assistance is provided to producers in developing and carrying out plans of farming and ranching operations that will help to minimize climatic hazards, conserve water and protect their lands from erosion and deterioration by natural causes. This is a voluntary program which supplements existing Departmental conservation programs and activities.

The Service enters into a long-term cost-sharing contract with a producer after agreement has been reached with him on a plan of operations for proper conservation treatment and use of all of the land in the farm or ranch operating unit. The contract may extend from 3 to 10 years. All cost-sharing contracts include a time schedule of proposed changes in cropping systems and land use and the conservation measures which are to be carried out on the farm or ranch during the contract period. The farmer or rancher who signs a Great Plains Program contract is responsible for accomplishing his plan of operations and should use all available sources of assistance under other local, State, or Departmental programs that contribute to achieving conservation land treatment and moisture conservation. The services of soil conservationists, engineers, or other agricultural specialists and aids are provided to assist farmers and ranchers to develop acceptable plans of operations and to install the planned land use and conservation treatment measures as scheduled in the plans covered by the contracts.

A list of practices eligible for cost-shares has been published. It includes establishment of permanent vegetative cover, field or contour strip cropping, contour cultivation, improvement of range cover, trees or shrubs for wind-breaks or shelterbelts, establishment of waterways, construction of terrace systems, chiseling or pitting of range land, construction of dams, development of irrigation works, construction of wells for livestock, installing pipe lines, constructing fences, and controlling brush. The maximum cost-share rate offered in any contract cannot exceed 80 percent of the average estimated cost of installing each eligible practice. There is a limitation, by program regulations, of \$2,500 per structure for cost-shares for developing dams or ponds for irrigation. It is the policy to limit administratively the cost-sharing amounts for all irrigation practices to \$2,500 for any one contract or to about one-fourth of the Federal obligation, whichever is the larger. The cost-share ceiling for any individual contract has been set at \$25,000 for a ten-year period. For a lesser period the maximum cost-share is \$2,500 times the number of years the contract is to be in force.

Program Assignments

Administrative responsibility for carrying out the Great Plains Conservation Program has been assigned to the Soil Conservation Service. A continuing inter-agency Departmental committee, consisting of representatives of the

Soil Conservation Service (as Chairman), Agricultural Conservation Program Service, Agricultural Marketing Service, Agricultural Research Service, Commodity Stabilization Service, Farmers Home Administration, Federal Crop Insurance Corporation, Federal Extension Service, Forest Service, and Office of Information, has been designated by the Secretary to recommend program policies, procedures, and regulations and to assure coordination of all Departmental resources in the Program. State and County Program Committees have been established also to help coordinate the program in the respective Great Plains States and counties and adapt it to specific needs within the program regulations.

Selected Examples of Recent Progress:

Following is the estimated distribution of the Great Plains Conservation Program funds by agency between cost-sharing payments and operating expense:

Item and Agency	1959 Obligations	1960 Appropriation	1961 Estimate
Cost-Sharing Payments by Soil Conservation Service	\$11,279,404	\$7,500,000	\$7,500,000
Operating Expenses:			
Agricultural Conservation Program Service.....	9,072	21,424	21,424
Commodity Stabilization Service.....	93,700	154,000	154,000
Forest Service.....	29,922	32,000	32,000
Office of Information....	27,762	20,600	20,600
Soil Conservation Service	<u>2,294,872</u>	<u>2,271,976</u>	<u>2,271,976</u>
Total	2,455,328	2,500,000	2,500,000
Grand Total	13,734,732	10,000,000 <u>a/</u>	10,000,000

a/ In addition, it is estimated that \$629,120 will be available from prior-year balances for cost-sharing assistance.

Eligible Counties Designated by Secretary

The Secretary has designated 344 counties in the 10 Great Plains States as of September 30, 1959, in which farmers and ranchers are eligible to participate in the program offered.

COLORADO (28) -- Adams, Arapahoe, Baca, Bent, Boulder, Cheyenne, Crowley, Douglas, Elbert, El Paso, Fremont, Huerfano, Jefferson, Kiowa, Kit Carson, Larimer, Las Animas, Lincoln, Logan, Morgan, Otero, Phillips, Prowers, Pueblo, Sedgwick, Washington, Weld, Yuma.

KANSAS (44) -- Barber, Cheyenne, Clark, Comanche, Decatur, Edwards, Finney, Ford, Gove, Graham, Grant, Gray, Greeley, Hamilton, Harper, Haskell, Hodgeman, Kearny, Kingman, Kiowa, Land, Logan, Meade, Morton, Ness, Norton, Pawnee, Phillips, Pratt, Rawlins, Reno, Rice, Rooks, Rush, Scott, Seward, Sheridan, Sherman, Stanton, Stevens, Thomas, Trego, Wallace, Wichita.

MONTANA (35) -- Big Horn, Carbon, Carter, Cascade, Choteau, Daniels, Dawson, Fallon, Fergus, Garfield, Glacier, Golden Valley, Hill, Judith Basin, Liberty, McCone, Musselshell, Petroleum, Phillips, Pondera, Powder River, Prairie Richland, Roosevelt, Rosebud, Sheridan, Stillwater, Sweet Grass, Teton, Toole, Treasure, Valley, Wheatland, Wibaux, Yellowstone.

NEBRASKA (58) -- Adams, Antelope, Arthur, Banner, Blaine, Boone, Box Butte, Boyd, Brown, Buffalo, Chase, Cherry, Cheyenne, Clay, Custer, Dawes, Dawson, Deuel, Dundy, Franklin, Frontier, Furnas, Garden, Garfield, Gosper, Greeley, Hall, Hamilton, Harlan, Hayes, Hitchcock, Holt, Howard, Kearny, Keith, Keya Paha, Kimball, Lincoln, Logan, Loup, McPherson, Merrick, Morrill, Nance, Nuckolls, Perkins, Phelps, Red Willow, Rock, Scotts Bluff, Sheridan, Sherman, Sioux, Thayer, Thomas, Valley, Webster, Wheeler.

NEW MEXICO (17) -- Chaves, Colfax, Curry, DeBaca, Eddy, Guadalupe, Harding, Lea, Lincoln, Mora, Quay, Roosevelt, San Miguel, Santa Fe, Socorro, Torrance, Union.

NORTH DAKOTA (30) -- Adams, Billings, Bottineau, Bowman, Burke, Burleigh, Divide, Dunn, Emmons, Golden Valley, Grant, Hettinger, Kidder, Logan, McHenry, McIntosh, McKenzie, McLean, Mercer, Morton, Mountrail, Oliver, Renville, Sheridan, Sioux, Slope, Stark, Stutsman, Ward, Williams.

OKLAHOMA (14) -- Beaver, Beckham, Cimarron, Custer, Dewey, Ellis, Greer, Harmon, Harper, Major, Roger Mills, Texas, Woods, Woodward.

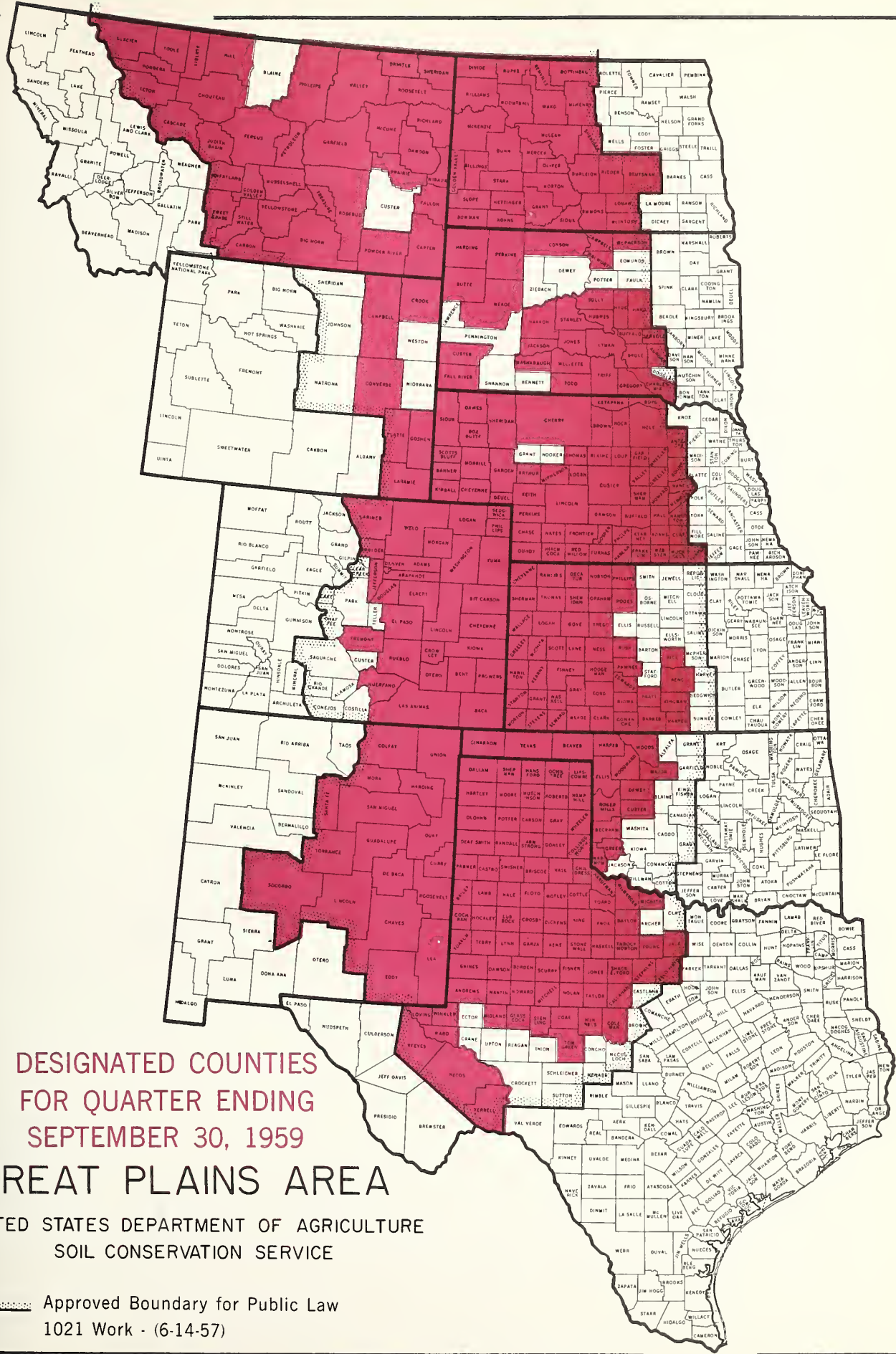
SOUTH DAKOTA (29) -- Aurora, Brule, Buffalo, Butte, Campbell, Charles Mix, Corson, Custer, Fall River, Gregory, Haakon, Hand, Harding, Hughes, Hyde, Jackson, Jerauld, Jones, Lyman, McPherson, Meade, Mellette, Perkins, Stanley, Sully, Todd, Tripp, Walworth, Washabaugh.

TEXAS (83) -- Andrews, Armstrong, Bailey, Baylor, Borden, Brisco, Callahan, Carson, Castro, Childress, Cockran, Coke, Coleman, Collingsworth, Cottle, Crosby, Dallam, Dawson, Deaf Smith, Dickens, Donley, Fisher, Floyd, Foard, Gaines, Garza, Glasscock, Gray, Hale, Hall, Hansford, Hardeman, Hartley, Haskell, Hemphill, Hockley, Howard, Hutchinson, Jack, Jones, Kent, King, Knox, Lamb, Lipscomb, Loving, Lubbock, Lynn, Martin, Midland, Mitchell, Moore, Motley, Nolan, Ochiltree, Oldham, Palo Pinto, Parmer, Pecos, Potter, Randall, Reeves, Roberts, Runnels, Scurry, Shackelford, Sherman, Stephens, Sterling, Stonewall, Swisher, Taylor, Terrell, Terry, Throckmorton, Tom Green, Ward, Wheeler, Wichita, Winkler, Wilbarger, Yoakum, Young.

WYOMING (6) -- Campbell, Converse, Crook, Goshen, Laramie, Platte.

A map showing the location of the 344 designated counties as of September 30, 1959, follows:





DESIGNATED COUNTIES
FOR QUARTER ENDING
SEPTEMBER 30, 1959

GREAT PLAINS AREA

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

 Approved Boundary for Public Law
1021 Work - (6-14-57)



Program Applications and Contracts as of June 30, 1959

Cumulative experience from inception of the program in late 1957 through June 30, 1959, for each of the ten Great Plains States and in total, is shown in the following tabulation:

State	Applications Received :			Contracts Signed :			Active Contracts :			Cost-Share Obligations :		
	No.	Acres		No.	Acres		No.	Acres		Total Obligations	Average	Per Acre
		(Total)										
Colorado	248	1,118,549	:	117	570,775	:	117	570,775	:	\$1,493,387	:	\$2.62
Kansas	244	453,746	:	126	247,171	:	125	246,535	:	1,103,105	:	4.47
Montana	465	2,644,160	:	110	546,890	:	109	545,325	:	581,673	:	1.07
Nebraska	980	1,136,343	:	465	528,235	:	465	528,235	:	2,043,421	:	3.87
New Mexico	336	4,837,386	:	175	1,927,253	:	174	1,927,173	:	1,511,912	:	0.78
North Dakota	684	1,000,843	:	276	419,551	:	276	419,551	:	803,984	:	1.92
Oklahoma	272	772,324	:	157	542,096	:	157	542,096	:	1,193,238	:	2.20
South Dakota	231	1,035,144	:	92	304,396	:	92	304,396	:	532,727	:	1.75
Texas	2,329	4,978,420	:	1,324	2,378,492	:	1,317	2,373,706	:	5,684,706	:	2.39
Wyoming	92	704,753	:	44	319,335	:	44	319,335	:	625,154	:	1.96
Total	5,881	18,681,668	:	2,886	7,784,194	:	2,876	7,777,127	:	15,573,307	:	2.00

Current Status of Applicants and Cost-Sharing Contracts

As of November 30, 1959, a total of 6,549 applications involving 21,780,588 acres of land had been received from farmers and ranchers in the 344 designated counties. Conservation plans of operations had been developed and cost-sharing contracts were in effect on 3,652 farms and ranches including 10,194,004 acres. This left a total of 2,897 active pending applications for assistance on file covering 11,586,584 acres. The 3,652 active contracts as of November 30, 1959 provide for cost-share payments to farmers and ranchers in the amount of \$18,710,244.

Revegetation of Land Unsited to Cultivation

Most of the land now in cultivated crops in the Great Plains is suited to continuous production of cultivated crops provided needed conservation measures are applied and good management practices are continuously employed. There are, however, some 11 to 14 million acres of land in cultivation that are not suited to such use by reason of the character of the soils and topography and the normal low rainfall pattern as evidenced by the low and uncertain crop yields that have been received. These are the lands that constitute the major conservation problem. Good progress is being made in helping farmers and ranchers to determine what areas of their farmland are unsited for cultivation and to make needed land use adjustments and convert these erodible areas to a permanent vegetative cover.

The 2,876 active contracts as of June 30, 1959, included 892,079 acres that had been cropland before the contracts were signed. The plans of operations developed and made a part of the contracts provide for the conversion of 262,838 acres or 29.5 percent of this cropland to permanently vegetated rangeland or other non-cropland use. The percentage of cropland conversions ranged from 11.2 percent in Wyoming to 64.8 percent in New Mexico. In a few cases, based on the desires of the farmer and the suitability of the land for cultivation, the plans of operation in contracts provided for the conversion of rangeland to cropland. Such conversions amounted to only 2,761 acres as of June 30, 1959. The active contracts as of June 30, 1959 also specified the reseeding of 361,350 acres of depleted and deteriorated rangeland. During the fiscal year 1959 farmers and ranchers actually completed the establishment of 34,947 acres of permanent vegetative cover and reseeded 81,302 acres of deteriorating rangeland for which they received cost-sharing assistance under their Great Plains Conservation Program contracts.

Practice Performance in the Fiscal Year 1959

During the fiscal year 1959 (the second year of program operations) the installation of conservation practices increased at an accelerating rate in all the Great Plains States. A total of 24 conservation practices are eligible for cost-sharing assistance. Included in the following tabulation are data on practice establishment and cost-shares paid for practices GP-1, Establishment of Permanent Vegetative Cover, and GP-5, Reseeding Range, the practices of major significance in the Great Plains Conservation Program:

State	Establishment of :				All Other :	
	Permanent :		Reseeding Range :		Conserva- :	
	Vegetative Cover :		(Practice GP-5) :		tion :	
	(Practice GP-1) :		(including fencing) :		Measures :	
	:Cost-Shares:		:Cost-Shares:		Cost-Shares:	
	:Acres : Paid*		:Acres : Paid*		Paid :	
						Total
						Cost-Shares
						Paid
Colorado	:1,350 :	\$18,804	: 1,614 :	\$22,959	: \$244,499 :	\$286,262
Kansas	: 560 :	5,965	:33,018 :	251,998	: 9,630 :	267,593
Montana	:1,079 :	7,358	: - :	-	: 18,985 :	26,343
Nebraska	:7,580 :	132,649	: 1,563 :	19,444	: 209,962 :	362,055
New Mexico ..	:6,410 :	44,568	: 1,764 :	30,556	: 314,414 :	389,538
North Dakota	:5,934 :	35,666	: 49 :	435	: 87,673 :	123,774
Oklahoma	:1,191 :	10,958	: 3,831 :	24,895	: 341,075 :	376,928
South Dakota	: 779 :	4,432	: 303 :	1,474	: 32,519 :	38,425
Texas	:9,457 :	45,259	:38,507 :	248,480	: 691,629 :	985,368
Wyoming	: 607 :	7,415	: 653 :	2,367	: 73,903 :	83,685
Total	:34,947:	313,074	:81,302 :	602,608	:2,024,289 :	2,939,971

* In addition to payment for complete treatment of the acreage reported, the amount shown includes payment to producers for completion of identifiable units towards completion of additional acreages of the two practices, such as seedbed preparation or fencing and payment to vendors for conservation materials or services furnished to producers.

Great Plains Conservation Program Contracts Speed Up
Sound Conservation Planning and Land Treatment

1. Elbert County, Colorado: The landowner of a range unit near Agate, Colorado which included 9,958 acres of dry cropland and native range lands, had for several years been a cooperator of the Agate Soil Conservation District but had been unable to accomplish needed land use adjustments and conservation treatment as rapidly as was desirable. He applied for assistance under the Great Plains Conservation Program in the early spring of 1958 and developed a conservation plan of operations that provided for stock water development, range pitting, and controlled grazing on the rangelands, and strip cropping, stubble mulching, diversions and terraces on the cropland. The plan also called for seeding approximately 145 acres of erodible cropland to perennial grasses for supplemental pasture. The total Federal cost-shares available for work to be performed under this contract amounted to \$16,889.

During the 1958 program year, this program participant completed 255 acres of strip cropping to control wind and water erosion on cropland; constructed 314 rods of range fencing needed for proper use of range vegetation; did 973 acres of range pitting to conserve moisture and minimize erosion; and constructed 16,346 feet of diversions for conservation and disposal of water. He also carried out good grass and cropland management practices as outlined in his plan of operations. He is completing in a few years, conservation work that might possibly never have been accomplished without planned and assured cost-sharing assistance.

2. Ford County, Kansas: The owner of a farm southwest of Dodge City became a program participant in the early spring of 1959. He operates a Grade A dairy and has 60 Holstein cows. His deep well irrigation system waters 160 acres. He has 1,359 acres of dryland farming that are used for producing wheat, forage sorghums, and grain sorghums.

This farmer needed a plan of conservation operations that would fit his diversified operations. He knew that he needed more efficient irrigation to support his dairy herd; that he needed to establish a sound cropping system and erosion control practice on his dryland farming; and that he needed to establish a system of grazing that would provide for improvement and proper use of his range lands. With Service technical assistance a plan was developed to accomplish these goals. The farmer now has a soundly planned and definitely scheduled program with guaranteed cost-sharing help to solve each of his soil and water conservation problems. About 70% of the cost of the installation of the permanent-type conservation practices will be borne by the Federal government under the terms of his Great Plains contract.

As of June 1, 1959, the landowner had already established several miles of terraces and three waterways. Twenty-six acres had been leveled for irrigation and 20 acres of permanent cover seeded on erodible farmland. Sorghum cover for additional seedings of native grasses was being established and a system of irrigation water management had been placed in effect.

Deferred grazing was being practiced to give 480 acres of native range an occasional rest. When the planned livestock wells and farm ponds are constructed adequate water will be available to permit proper use of rangelands.

3. Cheyenne County, Nebraska: The landowner of a 3,924 acre farm southwest of Sidney, Nebraska, became a cooperator of the soil conservation district in 1949 but he had been unable to apply the measures called for in his conservation plan as fast as was desirable even with the technical and cost-sharing help then provided by going programs. His farm includes 960 acres of cropland used mainly for winter wheat and spring grains and 2,840 acres of native range. With technical assistance made available under the Great Plains Conservation Program the farmer developed a plan of operations which became the first Great Plains contract in the Nebraska panhandle. His conservation plan included wind strip cropping, stubble mulching, pasture grooves, terraces, waterways, contour farming, livestock wells, cross fencing, deferred grazing, seeding, and proper use of range lands. All work under his contract is to be completed by the end of Great Plains program year 1962 at an estimated Federal cost of \$10,824.

Prior to becoming a program participant his pasture had not been properly utilized because of lack of proper fencing and water. By June 1, 1959, fences had been constructed splitting up his pastures so that grazing could be deferred on some of the areas each year. This also enables him to rotate his winter pastures. Five water wells had also been installed to supply water to all the pasture areas and enable proper use of grass even in the remotest corners. Pasture grooves completed on about 1,000 acres of pasture in 1958 have already resulted in improved vegetative cover. Grooves above three dams have prevented any runoff being stored in three reservoirs located in the grooved area which shows that all of the rainfall was stored in the soil for plant use. A fourth dam received enough runoff from its watershed which had not been grooved to stay full of water most of the summer of 1958.

When this landowner got started on the work outlined in his contract he became so interested that he had his contract modified so that he could install all the structural measures by the end of 1959. As of June 1, 1959, he had already completed 15 miles of terraces, 1,000 acres of pasture grooving and four livestock water wells, and he had made a good start on grass seeding, waterways, and fencing. With assistance supplied under the Great Plains Conservation Program he has been able to carry out conservation measures and treatments in two years that would otherwise have taken him at least another ten years to accomplish.

4. Union County, New Mexico: A rancher operating a 1,440 acre ranch in the Big Springs Community had been a cooperator of the Northeastern Soil Conservation District since 1947 but had been unable to apply very much of the conservation work called for in his ranch conservation plan prior to becoming a participant in the Great Plains program early in 1958. The plan of operations then developed called for seeding 180 erodible acres of his 325 acres total cropland to permanent grass, the construction of 523 rods of fencing for better distribution of grazing, the application of grass hay on 11 acres of badly eroded areas, the construction of erosion control dams and diversion dikes involving the movement of 5,000 cubic yards of earth, and the establishment of a farmstead windbreak. The total Federal share of the cost of the work was estimated at \$2,531.

In less than two years this rancher was able to complete most of the work specified in the plan of operations. The only work that remained to be done on his contract as of June 1, 1959, was the seeding of grass on the areas now planted in cover crops and a few small spots of hay seeding. The Great Plains contract has permitted him to make the final break from uncertain dryland farming to ranching, which has been his goal for many years and which he feels is the best use for his land.

5. Dunn County, North Dakota: A purebred polled hereford breeder near Manning, North Dakota, had long realized that he needed early tame pasture, water distribution, and cross fencing in order to make the best conservation use of 1,500 acres of native range. In order to protect his native grass from early grazing he had found it necessary to feed his cattle into May and sometimes even far into June. His distribution of water for proper grazing was poor and the lack of cross fencing made proper use of vegetation impossible. He knew that his situation had to be improved. When Dunn County became eligible for Great Plains Program assistance, he became one of the first applicants and was given technical assistance in developing a plan of operations for his ranch.

In 1958 the rancher seeded 301 acres of his 700 acres of cropland to tame pasture and built 520 rods of cross fencing to divide his 1,500 acre field of native range into three equal pastures of 500 acres each. This necessitated the provision of water for each pasture area so he constructed three stock-water dams, developed a spring, and drilled a well to distribute the water so that the livestock would graze all areas equally. In the spring of 1959 the rancher stated that he could already see improvements in the vegetative cover of his range which would become even more visible as soon as the tame pasture was ready for grazing. In addition to these accomplishments, he had also fenced his tame pasture, planted a three-row field windbreak to protect his cropland, and maintained contour and wind stripcropping on all cropland. The application of the scheduled practices was completed with Federal cost-sharing totaling \$4,133.

6. Cimarron County, Oklahoma: The owner and operator of a 3,432 acre unit in the southwest part of Cimarron County who became a Great Plains Conservation Program participant in 1958 carried on a combination ranching and farming enterprise. He has about 1,979 acres of rangeland and 1,434 acres of cropland of which 146 acres had been abandoned for years. The cropland is used primarily to supplement the range unit but some cash crops are grown. Prior to development of his Great Plains contract in April of 1958 the rancher had been attempting to irrigate some cropland through open ditches but seepage and water loss was high, so quite frequently he was unable to irrigate at the proper interval and as a result often made poor crops or sometimes had a complete failure. During poor grass producing years, the rancher had depended on grazing his cropland, both irrigated and dryland, to carry his cattle through. Usually these would be the same years when low production or failure occurred on his cropland, so as a result the cropland was grazed too heavily and left barren and subject to wind erosion.

The development of a sound plan to stabilize this unit required improvement of the irrigation system so that the producer could be assured of adequate forage and feed supplies for his livestock; the establishment of a proper cropping system along with stubble mulch tillage, restriction of grazing, and construction of moisture conservation and diversion terraces to effectively control wind and water erosion on the dryland cropland; and good management of all native range. The total Federal cost of the planned work is \$18,306.

During 1958 and early 1959, in accordance with the schedules outlined in his contract, the rancher had established permanent vegetation on 25 acres and overseeded 176 acres of poor condition range, he had established proper use on all grassland, and one-half mile of diversion terraces, a conservation cropping system, and stubble mulch tillage on all cropland. He also reorganized part of the irrigation system. The 1958 and 1959 seedings have resulted in good stands of grass being obtained on barren erodible areas. Forage yields have about doubled under the partially reorganized irrigation system, which provided more timely and efficient use of his irrigation water, and ample feed and forage are now available for livestock.

7. Mitchell County, Texas: The owner of a 8,765 acre ranch in western Mitchell County had several serious conservation problems that needed immediate attention. Among these were severe water erosion on both cropland and rangeland, need for additional water, control of brush and need for reseeding rangeland, and need for additional cross fencing for better management of native grass range. The plan of operations and schedule of conservation treatment developed for this ranch after he applied for assistance under the Great Plains Conservation Program, included the conversion of 180 acres of cropland to grass, the construction of seven miles of terraces on the remaining cropland, the construction of both net wire and earth diversions for effective water erosion control, the building of four livestock water ponds, the construction of 640 rods of cross fencing for better grazing management, and pitting of 172 acres of range land for improvement of moisture penetration. The total Federal obligations under this eight-year contract amount to \$19,265.

This landowner has made excellent progress in carrying out the conservation work outlined in his contract since it was developed in March of 1958. As of June 1, 1959, he had already seeded the planned 180 acres of cropland to grass, reseeded 172 acres of depleted rangeland, completed the construction of the seven miles of terraces planned as well as the earth diversions for effective control of water erosion. In addition, he had completed range pitting on the planned 172 acres of rangeland and had constructed two of the four planned stockwater ponds and had controlled brush on 132 acres of rangeland. There is no question in this landowners mind about the improved stability and soundness of his operating unit when all the planned conservation work is complete.

Land Damaged by Wind Erosion

Local estimates made in 280 counties covering 260 million acres indicate that over 3.1 million acres were damaged by wind action in the Great Plains during the blow season from about November 1, 1958 to May 31, 1959. This

was slightly less than the 3.7 million acres reported for the 1957-58 blow season and about one-third of the 10.3 million acres for the 1956-57 season. These estimates were based on surface soil conditions, soil moisture reserves, adequacy of cover and crop residues, and the condition of growing crops. The reported damages by wind action to cropland, rangeland, and other land were soil removal and deposition which subjects the land to further erosion hazards, materially lower yields, or impair the inherent productive capacity of the land.

For the first time during the past five years, a larger acreage of land damage was reported for the Northern Plains States than the Southern Plains States. On June 1, 1958, about 60 percent of the total land damage had occurred in the Southern Great Plains States. On June 1, 1956, about 85 percent of the total land damage had occurred in the Southern Great Plains States.

The following table shows, by State and major land uses, the area of land damaged by wind erosion during the blow season from about November 1, 1958, through May 31, 1959:

States	Cropland	Rangeland	Other Land	Total Land
	Acres	Acres	Acres	Acres
<u>Southern Great Plains</u>				
Colorado	100,000	14,000	-	114,000
Kansas	102,000	3,000	3,000	108,000
New Mexico	114,000	13,000	1,000	128,000
Oklahoma	102,000	2,000	2,000	106,000
Texas	952,000	39,000	86,000	1,077,000
Total	1,370,000	71,000	92,000	1,533,000
<u>Northern Great Plains</u>				
Montana	706,000	16,000	2,000	724,000
Nebraska	49,000	-	2,000	51,000
North Dakota	781,000	5,000	1,000	787,000
South Dakota	4,000	-	-	4,000
Wyoming	27,000	6,000	-	33,000
Total	1,567,000	27,000	5,000	1,599,000
<u>Grand Total</u>	<u>2,937,000</u>	<u>98,000</u>	<u>97,000</u>	<u>3,132,000</u>

Nearly 90 percent of the total land damaged by wind action this season was reported for Texas, North Dakota, and Montana.

Moisture Conditions in Great Plains

Precipitation during the 1958-59 blow season was generally favorable except for critical areas in Eastern Montana, the Dakotas, and in parts of the High and Rolling Plains in Texas where severe drought conditions prevailed. Rainfall during May 1959 was generally moderate to heavy in critical areas except for Eastern Montana. According to local estimates, soil moisture supplies were generally adequate throughout the blow season for about 70 percent of the 280 counties reporting. However, the soil moisture situation improved appreciably during May in most counties.

Crop Damage by Wind Erosion

About 225,000 acres of growing wheat were destroyed during the blow season, of which 75,000 acres were destroyed during May. The largest crop losses occurred during March and May, totalling 160,000 acres. The largest loss, 91,000 acres, occurred in North Dakota. The acreage of crops destroyed this season was about 20 percent less than the 300,000 acres reported destroyed last season.

Emergency Tillage

About 3.5 million acres of cropland, which were not otherwise protected from wind action, received emergency tillage operations in the Great Plains States during the 1958-59 blow season. Nearly two million acres of the season's total were reported for Texas and about one-half million acres each for North Dakota and New Mexico. The acreage on which emergency tillage operations were performed this season was about 20 percent less than the 4.3 million acres so treated last year. More than 375,000 acres of cropland was emergency tilled during May.

Comparative Charts of Damages

Comparative charts of the cumulative damage by months for the past five blow seasons and of the annual damage since the 1934-35 blow season follow:



CHART I

Estimates of Cumulative Acres Damaged — Great Plains

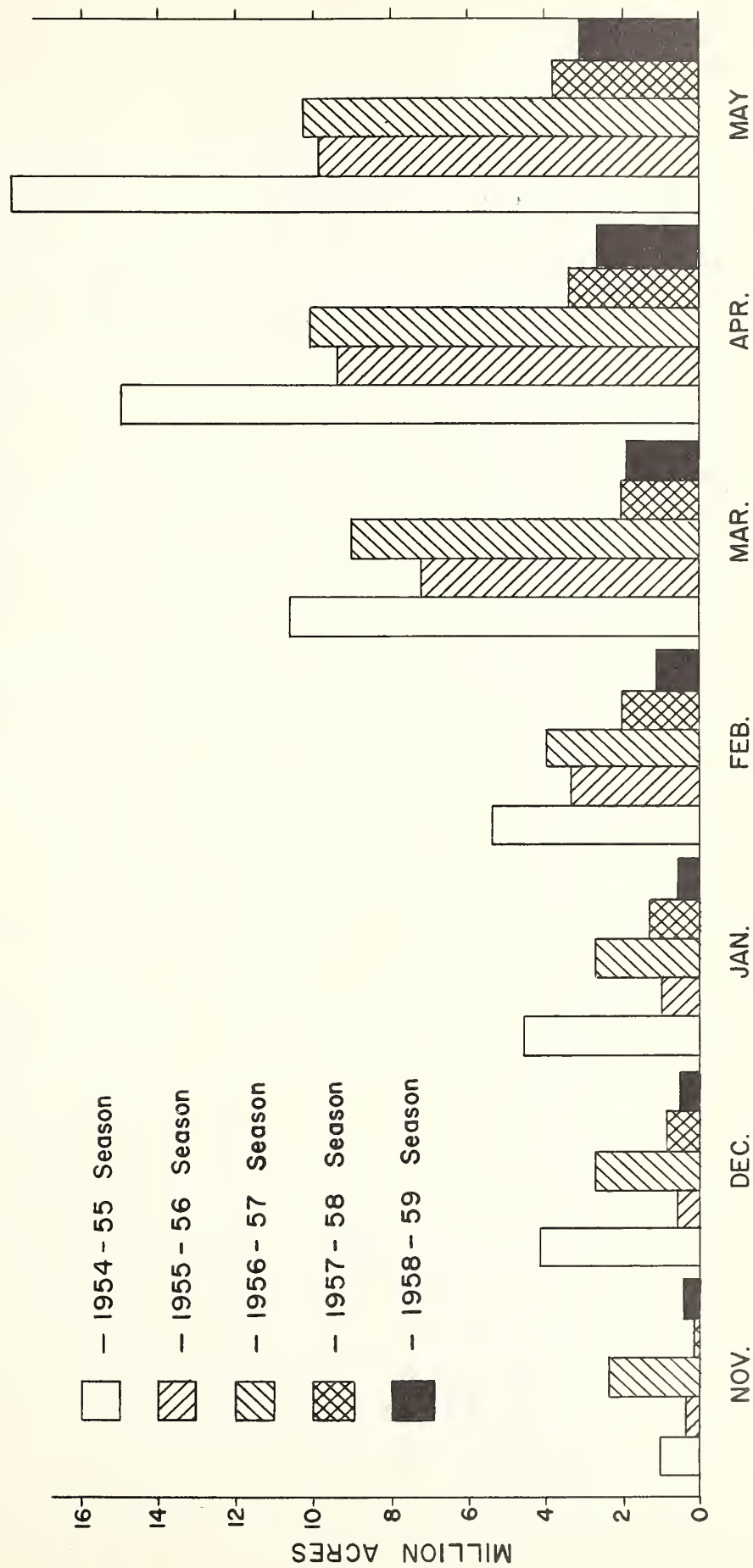
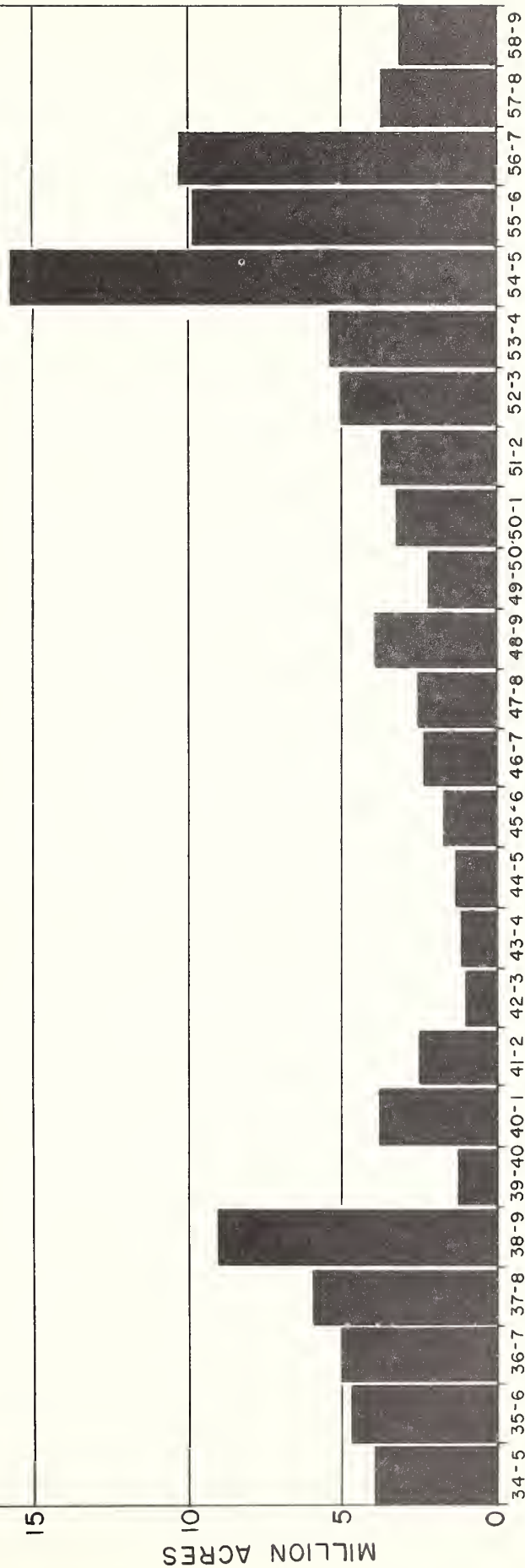




CHART 11

ACRES OF LAND DAMAGED ANNUALLY IN GREAT PLAINS Seasons 1934-35 to 1958-59, inclusive



Note: Data for period 1943-44 through 1952-53 were obtained from reports of the Great Plains Council.
All other data were obtained from SCS reports.



(e) Water Conservation and Utilization Projects

Appropriation Act, 1960 and base for 1961	\$75,000
Budget Estimate, 1961	- -
Decrease (due to adequacy of funds available from prior years to furnish technical assistance and guidance to project settlers until the project is closed)	<u>-75,000</u>

PROJECT STATEMENT
(On basis of available funds)

Project	1959	1960 (estimated)	Decrease	1961 (estimated)
Development of land for irrigation a/	\$242,382	\$75,000	-\$15,000	\$60,000
Unobligated balance brought forward	-17,185	-109,803	- -	-109,803
Unobligated balance carried forward	+109,803	+109,803	-60,000	+49,803
Total employee health benefit costs (P. L. 86-382).....	[- -]	[- -]	[- -]	[500]
Total appropriation or estimate	335,000	75,000	-75,000	- -

a/ Represents obligations. Applied costs for 1959 are \$242,270. The difference of \$112 reflects, primarily, the excess of orders for supplies placed in 1959 over those received in that year.

DECREASE

The schedule for the Eden Valley, Wyoming Project provides for the completion of all land development for irrigation farming by December 31, 1959, and for the sale of all farming units by June 30, 1960. Some key personnel will be retained at the project during the fiscal year 1961 and into the fiscal year 1962 to assist settlers in becoming established on their new farms by extending to them technical assistance and guidance on matters of good farming practices, soil and water conservation, and efficient land use as provided in the authorizing legislation. Sufficient funds are available from prior-year appropriations to complete the planned work and no new appropriation will be required.

CHANGE IN LANGUAGE

The estimates include a proposal to delete the language of this item as follows:

[For expenses necessary to carry out the functions of the Department under the Acts of August 11, 1939, and October 14, 1940 (16 U.S.C. 590y-z-10), as amended and supplemented, June 28, 1949 (63 Stat. 277), and September 6, 1950 (7 U.S.C. 1033-39), relating to water conservation and utilization

projects, to remain available until expended, \$75,000, which sum shall be merged with the unexpended balances of funds heretofore appropriated to said Department for the purpose of said Acts.]

As indicated above, no new appropriation will be required for water conservation and utilization projects.

STATUS OF PROGRAM

Selected Examples of Recent Progress:

Number Projects Developed

Nineteen Water Conservation and Utilization Projects were originally authorized for development and settlement under the Department of Interior Appropriation Act of 1940 and the "Case-Wheeler" Act of August 11, 1939, as amended and supplemented. Six of these projects are no longer planned for development due to inflationary land prices and other changes since they were authorized. Twelve projects have been completed. The only remaining project of the original authorization, located at Eden Valley, Wyoming, is scheduled for completion in the fiscal year 1962.

Last Project at Eden Valley, Wyoming

Status of Land Exchanges:

Land development for irrigation on the Government-owned land on the Eden Valley Project was begun in the spring of 1954. At that time there were certain Federal lands on the project which were proposed to be exchanged for public domain land held by the Department of the Interior and for lands belonging to the State of Wyoming that were found to be better suited for irrigation farming. Public Law 377, approved May 28, 1954, authorized these land exchanges. The initial transfer of lands under this law from the Department of Interior to the Department of Agriculture was made in May, 1955. The transfer of the remaining lands was accomplished during the 1956 fiscal year. The land exchanges between the Department of Agriculture and the State of Wyoming were completed during the 1957 fiscal year. A final transfer during the fiscal year 1960, after project development work is completed, will convey Federal lands not used in the development of the project from the Department of Agriculture to the Department of Interior.

Status of Land Development and Sales:

All land development for irrigation farming on the Eden Valley Project will be completed by December 31, 1959, and all sales of farms are planned to be completed by June 30, 1960. Project personnel are being gradually reduced as the project approaches completion. Some key personnel will be retained at the project into the fiscal year 1962 to assist settlers in becoming established on the new farms by extending technical guidance and advice to them on matters of good farming practices, soil and water conservation, and efficient land use as provided by the authorizing legislation. It is expected that a soil conservation district will be organized by the time the project office is discontinued. Continuing technical assistance then will be provided the project settlers under the Conservation Operations program of the Soil Conservation Service.

Demonstration Farm:

By memorandum of agreement between the State of Wyoming and the Soil Conservation Service, one farm unit on the Eden Valley Project is being made available to the State for use as a demonstration farm to assist settlers in planning and establishing successful irrigation and livestock practices. This unit will later be sold under the usual procedure after it has served its purpose as a demonstration farm.

Program Obligations

The following table shows the actual obligations incurred under this program in 1959 and estimated obligations for the fiscal years 1960 and 1961.

Project	: Actual : F.Y. 1959	: Estimated : F.Y. 1960	: Estimated : F.Y. 1961
Eden Valley, Wyoming (Direct project costs)	: \$215,124	: \$64,000	: \$50,000
General administration	: 27,258	: 11,000	: 10,000
Total Estimates	: 242,382	: 75,000	: 60,000

Development Accomplishments and Workload

The following table shows some of the more important items of development work planned, the amount completed to date, and the amount remaining to be done:

Item	: Unit	: Total : Development: : Planned *	: Accomplished : to : 6/30/59	: Remaining to : be done : 7/1/59
Topographic surveys	: Acre	: 161,478	: 161,478	: --
Land classification	: Acre	: 194,089	: 194,089	: --
Unit subdivisions	: No.	: 546	: 546	: --
Clearing	: Acre	: 29,813	: 29,782	: 31
Leveling	: Acre	: 67,380	: 67,319	: 61
Farm laterals	: Mile	: 920	: 920	: --
Farm drains	: Mile	: 500	: 500	: --
Farm irrigation structures .	: No.	: 8,996	: 8,996	: --

*Project reduced in scope and planned development revised as of 6/30/58.

Status of Land Development and Farm Sales
as of June 30, 1959 - All Projects

Project	Date Authorized	Irrigable Acreage	Percent Development Completed	Federally-owned tract ^{c/}	
				Total number	Number sold
Angostura	March 6, 1941	12,154	100	105	105
Bitterroot	March 22, 1944	18,630	8 ^{b/}	-	-
Buffalo Rapids I ..	May 15, 1940	14,507	100	95	95
Buffalo Rapids II ..	May 15, 1940	10,400	100	110	110
Buford-Trenton	Sept. 23, 1939	14,729	100	134	134
Dodson ^{a/}	March 17, 1944	1,200	100	-	-
Eden Valley	Sept. 18, 1940	17,000	99	75	36
Intake ^{a/}	Jan. 20, 1944	825	99 ^{b/}	-	-
Mancos	Oct. 24, 1940	10,000	54 ^{b/}	2	2
Mirage Flats	March 30, 1940	12,000	100	111	111
Missoula ^{a/}	May 10, 1944	900	100	-	-
Newton ^{a/}	Oct. 17, 1940	2,225	100	-	-
Post Falls	Jan. 29, 1944	3,260	90 ^{b/}	17	17
Rapid Valley	Nov. 8, 1939	12,000	- ^{b/}	-	-
Scofield ^{a/}	May 24, 1943	12,500	30 ^{b/}	-	-

^{a/} Projects include no Federally-owned land.

^{b/} Projects closed, no further development work contemplated.

^{c/} In addition there are privately-owned lands within a number of projects on which development work is done.

Project Authorizations and Obligations Through 6/30/59

Project	Present	Obligations through 6/30/59			
	Project	"Wheeler-	"Great	Contri-	Total
	Authori- zation	Case" Funds	Plains" Funds <u>b/</u>	buted Funds	
Angostura	\$1,484,000	\$1,399,211:	-	-	\$1,399,211
Balморhea	569,000	-	-	-	-
Bismarck	None	-	-	-	-
Bitterroot	752,000	167,811:	-	-	167,811
Buffalo Rapids I ...	743,770	99,296:	\$210,000	\$424,175:	733,471
Buffalo Rapids II ..	810,122	319,721:	345,000	139,608:	804,329
Buford-Trenton	1,094,000	62,798:	762,958	264,838:	1,090,594
Dodson	84,000	51,484:	-	-	51,484
Eden Valley	2,340,000	1,755,711:	154,595	5,061:	1,915,367
Intake	41,000	20,817:	-	-	20,817
Mancos	473,000	366,879:	-	-	366,879
Mann Creek	None	-	-	-	-
Mirage Flats	687,300	479,152:	170,000	36,837:	685,989
Missoula	133,000	65,297:	-	-	65,297
Newton	75,500	74,230:	-	-	74,230
Post Falls	196,000 ^{a/}	196,367:	-	-	196,367
Rapid Valley	170,000	7,117:	15,042	-	22,159
Saco Divide	480,000	-	405	-	405
Scofield	350,000	119,531:	-	12,200:	131,731
Total Direct					
Project Costs ..	10,482,692	5,185,422:	1,658,000	882,719:	7,726,141
Project Investiga- tions and Surveys.	-	233,473:	-	-	233,473
General Administra- tion Farm Security					
Administration ...	-	349,091:	-	-	349,091
Office of Production.	-	4,137:	-	-	4,137
Office of the Solicitor	-	59,957:	-	-	59,957
Soil Conservation Service	-	931,683:	-	-	931,683
Total Obligations through 6/30/59 ..	-	6,763,763:	1,658,000	882,719:	9,304,482

a/ Net obligations after deduction for residual value of equipment is \$186,545.

b/ Pursuant to Act of October 14, 1940 (54 Stat. 1119).

STATEMENT OF OBLIGATIONS UNDER ALLOTMENTS AND OTHER FUNDS

(includes only those amounts, which by November 30, 1959, were actually received or programmed for 1960 or 1961. Since work for other agencies is performed on a service basis, at the request of those agencies and for their benefit, it is not practicable to estimate in advance the amounts to be received in most cases.)

Item	Obligations, 1959	Estimated Obligations, 1960	Estimated Obligations, 1961
AlLOTment from:			
<u>Conservation Reserve, Program, Commodity</u>			
<u>Stabilization Service</u> - For counsel and			
guidance to farmers and ranchers in			
converting acreage from crop production			
to grass and trees, and technical serv-			
ices in selection and establishment of			
soil and water conservation practices ..	\$541,652	\$300,000	\$300,000
Allocations and Working Funds (Advances			
from other agencies):			
<u>International Cooperation Admin-</u>			
<u>istration:</u>			
For training and technical assistance			
activity	43,989	52,000	52,000
For assistance in compiling booklet			
on Icelandic soils under Special			
Project agreement	2,500	- -	- -
Total, International Cooperation			
Administration	46,489	52,000	52,000
<u>Office of Civil and Defense</u>			
<u>Mobilization:</u>			
For radiological defense training	- -	25,000	25,000
<u>Atomic Energy Commission</u> - For con-			
struction of laboratory facilities	13,209	- -	- -
Total, Advances from other agencies	59,698	77,000	77,000
Trust Funds:			
<u>Technical Services and Other Assistance,</u>			
<u>Agricultural Conservation Program</u>			
<u>Service</u> - For technical and other			
assistance to farmers and ranchers in			
participating counties pursuant to			
agreements with individual Agricultural			
Stabilization and Conservation State			
and County Committees	3,698,318	- -	- -
<u>Miscellaneous Contributed Funds, Depart-</u>			
<u>ment of Agriculture:</u>			
For flood control works of improvement			
on the Los Angeles River watershed ...	23,877	41,020	41,000

(Continued on next page)

Item	: :Obligations, : 1959	: Estimated :Obligations, : 1960	: Estimated :Obligations, : 1961
For cooperation with Soil Conservation Commission, California, in developing cultural methods and experimental seed supplies at Pleasanton Nursery	35,134	35,000	35,000
For cooperation with State and local organizations in the survey of watershed projects and the installation of watershed works of improvement	165,334	223,980	224,000
Total, Miscellaneous Contributed Funds	224,345	300,000	300,000
Total, Trust Funds	3,922,663	300,000	300,000
<u>Obligations under Reimbursements from Governmental and other Sources:</u>			
Conservation operations:			
For sale of cartographic reproductions, cooperative projects with State agencies, detail of personnel to other Federal agencies, sale of equipment and accessories for which the proceeds are used to purchase similar items, etc.	1,798,100	1,813,018	1,860,000
For technical and other assistance to farmers and ranchers in participating counties pursuant to agreements with individual Agricultural Stabilization and Conservation State and County Committees	3,991,707	7,547,742	7,500,000
Watershed protection	390,953	444,592	445,000
Flood prevention	37,231	22,011	22,000
Great Plains conservation program	1,111	1,340	1,000
Water conservation and utilization projects	510	- -	- -
Total, Reimbursable obligations	6,219,612	9,828,703	9,828,000
TOTAL, OBLIGATIONS UNDER ALLOTMENTS AND OTHER FUNDS	10,743,625	10,505,703	10,505,000

PASSENGER MOTOR VEHICLES

Conservation Operations

The estimates for 1961 provide for the scheduled replacement of 113 passenger motor vehicles during the fiscal year. The Service authorizes the use of passenger motor vehicles by area conservationists, technical specialists, survey supervisors and State office personnel for travel where public transportation is inadequate, non-existent or not feasible. As a rule, passenger vehicles are used for travel to several locations in a single day. Frequent stops are made to examine field work or to discuss the soil conservation program with resident technicians at isolated points in the State. It is impossible to use other means of transportation in lieu of these vehicles because of the nature of this travel, the frequency of the stops and the fact that common carrier facilities do not serve the rural areas.

Watershed Protection

The estimates for 1961 provide for the replacement of 12 passenger motor vehicles during the year. These vehicles are required by technicians and survey parties for investigation and surveys of proposed small watershed projects and for planning and supervising the installation of works of improvement in authorized watershed project areas. Transportation of two or more technicians or aides is frequently required by the nature of the work. Most watershed project areas are not served by common carrier and the use of pickup trucks is not feasible.

Flood Prevention

Six passenger motor vehicles are scheduled to be replaced during the fiscal year in the estimates for 1961. These vehicles are used by technicians and aides engaged in the installation of works of improvement in the eleven authorized projects. These employees usually have to travel considerable distances in rural areas where public transportation is inadequate or non-existent and under circumstances where the use of pickup trucks is not feasible.

Great Plains

The estimates for the fiscal year 1961 provide for the replacement of one passenger motor vehicle during the year. These vehicles are used by Assistant State Conservationists in connection with supervision and inspection activities in the Great Plains Conservation Program. The use of common carrier or pickup trucks is not feasible in the performance of their duties since the majority of the travel is to rural areas and they are often accompanied by one or more field technicians.

General

The Soil Conservation Service operated 906 passenger motor vehicles on June 30, 1959. None of these are used in Washington, D. C., but are distributed among the 51 State and Territorial offices, approximately 300 area offices and various technical specialists located at field headquarters.

Resident technicians servicing the farmers and ranchers in soil conservation districts travel in pickup trucks to field areas to conduct surveys and prepare conservation plans, perform engineering work or to lay out conservation practices.

All of the vehicles proposed to be replaced will be well within the standards of 60,000 miles or 5 years of age established by the General Services Administration. The policy of the Soil Conservation Service is to plan for replacement of about one-seventh of the inventory each year. This permits replacement of vehicles that have reached seven years of age and have been driven about 70,000 miles. This policy is based on past experience.

As of June 30, 1959, the Service had 28 vehicles seven years or older and about 100 with 70,000 miles or more. The Service will replace 122 vehicles during the fiscal year 1960. By June 30, 1960, it is estimated that approximately 100 vehicles will have been driven more than 70,000 miles.

The 132 replacements scheduled for 1961 will enable replacement of all passenger vehicles in the fleet over 7 years of age or 70,000 miles. Actual replacement will, however, be based upon economy of operation, and expected use factors as well as the age and mileage. Past efforts to bring the fleet back on a sound replacement schedule have been effective. On June 30, 1959, only 2.0% of the fleet was more than 7 years old compared with 7.0% a year earlier. Similarly on June 30, 1959, about 10% of the fleet registered mileage over 70,000 miles as compared to 15% a year earlier. Replacements proposed for the current fiscal year will further improve this relationship.

Passenger cars are not assigned to one individual exclusively at locations where more than one employee has need for the equipment. This allows several employees to use a single car. Also, all employees are directed by Service policy to coordinate travel to the same locality so as to utilize transportation equipment efficiently. Thus two or more employees are transported in the same vehicle whenever it is feasible.

Tabulations showing total mileage and age of passenger motor vehicles operated by the Soil Conservation Service on June 30, 1959, follows:

<u>Mileage</u>	<u>Number of Passenger Vehicles</u>	<u>Percentage</u>
Over - 100,000	3	0.3
80,000 - 100,000	32	3.5
60,000 - 80,000	119	13.1
50,000 - 60,000	85	9.4
40,000 - 50,000	112	12.4
30,000 - 40,000	136	15.0
20,000 - 30,000	150	16.6
10,000 - 20,000	165	18.2
1,000 - 10,000	102	11.3
0 - 1,000	2	0.2
	<u>905</u>	<u>100.0</u>

<u>Year Model</u>	<u>Number of Passenger Vehicles</u>	<u>Percentage</u>
Prior year models	2	0.2
1950	3	0.3
1951	14	1.5
1952	9	1.0
1953	55	6.1
1954	24	2.7
1955	94	10.4
1956	142	15.7
1957	225	24.6
1958	264	29.1
1959	76	8.4
	<u>906</u>	<u>100.0</u>

AGRICULTURAL CONSERVATION PROGRAM SERVICE

Purpose Statement

The Agricultural Conservation Program Service has the primary responsibility for the administration of the Agricultural Conservation Program authorized by the provisions of section 7 to 16(a) inclusive, and section 17 of the Soil Conservation and Domestic Allotment Act, as amended; and the Emergency Conservation Measures authorized by the Third Supplemental Appropriation Act of 1957 and the Supplemental Appropriation Acts of 1958 and 1959. It determines the conditions under which public sharing of farmers' conservation costs is needed and justified to protect the Nation's interest in preserving agricultural land and water resources. It also determines the extent to which such cost-sharing should be offered, how, when and where it will be accomplished and whether the results are in accord with sound public policy. In making these determinations, State and County ACP Development Groups are asked for recommendations which are given full consideration.

The Service administers the following programs:

1. Agricultural Conservation Program: To achieve the objectives of this program which include (1) restoring and improving soil fertility, (2) reducing erosion caused by wind and water, and (3) conserving water on land, the Agricultural Conservation Program Service offers cost-sharing assistance to individual farmers and ranchers in the 50 States, Puerto Rico and the Virgin Islands for carrying out approved soil-building and soil- and water-conserving practices on their farms. This assistance represents only a part of the cost of performing the practice. The farmer bears the balance of the cost and in addition supplies labor and management necessary to carry out the practice. Allocations are made to States based upon conservation needs.

Cost-sharing assistance is offered only for the soil, water, and woodland conservation practices considered necessary to meet the most urgently needed conservation problems of the farm, which would not otherwise be carried out to the extent needed. To be eligible for cost-sharing assistance the farmer must make application therefor before beginning the practice.

Conservation measures for which cost-sharing assistance is offered, include practices primarily for:

- a. Establishment of permanent protective cover.
- b. Improvement and protection of established vegetative cover.
- c. Conservation and disposal of water.
- d. Establishment of temporary vegetative cover.
- e. Temporary protection of soil from wind and water erosion.

Cost-sharing assistance is available in the form of:

- a. Partial payment of the purchase price of materials and services needed by the farmer for carrying out approved practices, or

- b. Partial reimbursement to farmers who have carried out approved practices at their own expense.

Materials and services are obtained through local private sources where practicable. Rates of assistance vary by practices and by States and areas so as to make the most effective use of available funds.

2. Emergency Conservation Measures: The objective of this program is to restore to normal agricultural use farmlands which have been damaged by wind erosion, hurricanes, floods, or other natural disasters. To this end, farmers are offered cost-sharing assistance for carrying out approved practices. Assistance is given only when new conservation problems are created which:
 - a. If not treated will impair or endanger the land.
 - b. Materially affect the productive capacity of the land.
 - c. Represent damage which is unusual in character and except for wind erosion, is not the type which would recur frequently in the same area.
 - d. Will be so costly to rehabilitate that Federal assistance is or will be required to return the land to productive agricultural use.
3. Work performed for other Department agencies is as follows:
 - a. Conservation Reserve Program: The ACPS assists in developing operating procedures relating to conservation measures and cost-share rates. It assembles, compiles and reviews statistics with respect to conservation measures carried out under the program, which is administered by the Commodity Stabilization Service.
 - b. Great Plains Conservation Program: The ACPS, with other agencies, assists in developing and reviewing policies and general operating procedures for this program, which is administered by the Soil Conservation Service. The ACPS provides leadership in developing and recommending a national list of conservation practices for cost-sharing eligibility, and reviews and makes recommendations on State practices.

These foregoing responsibilities are discharged by a small staff organization working largely through and with other Federal, State, and local agencies concerned with conservation, particularly those in the fields of research, education, technical servicing and credit.

As of November 30, 1959, the ACPS had 62 full-time employees and 1 part-time employee all of whom were located in Washington, D. C.

	Appropriated, 1960	Budget Estimate, 1961
Agricultural Conservation Program	\$241,500,000	\$242,600,000
Emergency Conservation Measures <u>a/</u>	- -	- -

- a/ Balance in appropriation is \$15,856,254 at end of F.Y. 1959 and is estimated at \$10,856,254 at end of F.Y. 1960. Obligations are estimated at \$5 million in each of the fiscal years 1960 and 1961.

(a) Agricultural Conservation Program

	On Direct Appropriation Basis	On Program Authorization Basis
Appropriation Act, 1960 and base for 1961	\$241,500,000	\$250,000,000
Budget Estimate, 1961	242,600,000	100,000,000
Increase or decrease	<u>+1,100,000</u>	<u>-150,000,000</u>

INCREASE, 1961

(On basis of direct appropriation)

Cost-sharing assistance to farmers

For carrying out a \$250 million 1960 Agricultural

Conservation Program as authorized by Congress +1,100,000

The Agricultural Conservation Program is operated on a program or crop-year basis and cost-sharing assistance is earned by farmers upon completion of approved measures. Funds for cash payments earned under the 1959 Agricultural Conservation Program, which closes on December 31, 1959, were made available in the Department of Agriculture and Farm Credit Administration Appropriation Act, 1960. In that Act, the Congress also authorized the formulation and administration of a \$250 million program for 1960 for which this estimate is submitted.

PROJECT STATEMENT

(On basis of program authorization)

Project	:Appropriation: : 1959 :(1958 Prog.) :(actual)	:Appropria- : tion 1960 :(1959 Prog.) :(estimate)	:Increase : or :Decrease	:Appropriation : 1961 :(1960 Prog.) :(estimate)
1. <u>Cost-sharing assistance to farmers</u>	\$216,266,677	\$222,170,605	- -	\$222,170,605
Other program expenses	1,528,445	1,440,445	- -	1,440,445
Total program expenses	<u>217,795,122</u>	<u>223,611,050</u>	- -	<u>223,611,050</u>
2. <u>Operating expenses:</u>				
County expenses (Sec. 388):				
ASC county committees	19,753,361	21,295,131	-\$35,354	21,259,777
Forest Service	112,989	113,619	+654	114,273
Total county committee expenses	<u>19,866,350</u>	<u>21,408,750</u>	<u>-34,700</u>	<u>21,374,050</u>
National and State Office expenses (Sec. 392):				
Agricultural Conservation Program Service	564,017	581,625	+1,432	583,057
National and State Offices (CSS)	4,790,014	4,825,084	+33,192	4,858,276
Forest Service	16,632	17,491	+76	17,567
Total National and State Office expenses	<u>5,370,663</u>	<u>5,424,200</u>	<u>+34,700</u>	<u>5,458,900</u>
Total operating expenses ..	<u>25,237,013</u>	<u>26,832,950</u>	- -	<u>26,832,950</u>
Total employee health benefit costs (P.L. 86-382) ...	<u>[- -]</u>	<u>[- -]</u>	<u>[+44,150]</u>	<u>[44,150]</u>
Total obligations	<u>a/243,032,135</u>	<u>250,444,000</u>	- -	<u>250,444,000</u>

(Continued on next page)

Project	: Appropria- : tion 1959 :(1958 Prog.) : (actual)	: Appropria- : tion 1960 :(1959 Prog.) : (estimate)	: Increase or : Decrease	: Appropria- : tion 1961 :(1960 Prog.) : (estimate)
Adjustments:	:	:	:	:
Difference in amount used for :	:	:	:	:
purchase of conservation mate-:	:	:	:	:
rials and services from prior :	:	:	:	:
fiscal year appropriation for :	:	:	:	:
current program and amount :	:	:	:	:
used for such purchases from :	:	:	:	:
current fiscal year	+3,048,386:	+200,000:	-19,200,000	-19,000,000
Reimbursements from sale of :	:	:	:	:
aerial photographs	-444,000:	-444,000:	- -	-444,000
Received by loan from CCC	-40,000,000:	-38,200,000:	+19,000,000	-19,200,000
Repayment of loan from CCC	+22,500,000:	+29,500,000:	+1,300,000	+30,800,000
Available for repayment of :	:	:	:	:
loan from CCC	+6,863,479:	- -	- -	- -
Appropriation or estimate	235,000,000:	241,500,000:	+1,100,000(1)	242,600,000

a/ Total direct applied costs were \$234,909,891 in fiscal year 1959. This amount is not directly reconcilable to the obligations shown above, which, for program payments, relate to the program year rather than the fiscal year.

INCREASE

(1) An increase of \$1,100,000 on a direct appropriation basis. The appropriation request for fiscal year 1960 was reduced from \$250 million to \$241.5 million, a reduction of \$8.5 million due to the availability of underearnings of this amount on the 1957 program. An increase of \$8.5 million would normally be required in the 1961 appropriation in order to carry out a 1960 Agricultural Conservation Program of \$250 million as authorized by the Congress. However, since underearnings of \$7.4 million on the 1958 program are anticipated to be available to finance the 1961 program, an increase of only \$1.1 million is required.

The adjustment of \$34,700 between county committee expenses and expenses of the national and State offices is required to meet employee health benefit costs under Public Law 36-382, applicable to the transfer to "Administrative expenses, section 392, Agricultural Adjustment Act of 1938". A full explanation of the health benefit cost estimates appears in the "Preface" at the beginning of the Explanatory Notes.

Advance Authorization for 1961 Agricultural Conservation Program

An advance authorization of \$100 million is proposed for the 1961 program year. This reduction does not affect the amount of funds required to be appropriated for the fiscal year 1961, but rather will be reflected in the budget for the fiscal year 1962. It is contemplated that the Department's total conservation effort will continue to be maintained at a substantial level.

While the Agricultural Conservation Program now is being directed primarily toward measures with conservation benefits, the degree of conservation achieved differs

from practice to practice. Moreover, the conservation problems which authorized practices are intended to correct differ in the degree of urgency, the need for immediate correction and the amount of conservation involved. Land with material conservation problems at the high priority end of this scale will likely be materially damaged in a short time unless immediate corrective steps are taken. Land with conservation problems at the lower end of this scale may suffer some impairment of its most efficient use so long as the problem is not corrected. However, the land resource and its potential production will be available when needed in the future. Under present conditions of agricultural output, this program should be directed toward those problems of highest priority.

It is planned to continue to increase program emphasis on those conservation measures which are of major importance to farmers in making a transition from cropland to grass or trees and in keeping land which otherwise might be shifted to a more intensive use, in conservation cover. Likewise, it is planned to de-emphasize measures that contribute to immediate increases in production. Certain changes in the 1961 program are desirable if there is to be implementation of this policy. For example, it would be necessary to eliminate assistance for conservation measures which tend to bring about an early increase in production. Since the effect of conservation measures is not uniform in this respect from area to area, this problem will need to be considered locally. Determination of those practices to be curtailed or eliminated will not be made until after receiving the recommendations of the State Development Groups.

The 1961 proposal assumes that favorable action will be taken by the Congress on the bill (H.R. 6094) to amend Section 8(e) of the Soil Conservation and Domestic Allotment Act. If enacted the bill will eliminate the provision which requires automatic increases in cost-share payments which are less than \$200. For the past several years the amount required for making these additional payments has amounted to over \$10 million per year. It is anticipated that no funds will be required for making the additional payments under the 1961 program.

County and State ACP Development Groups would be asked to make further adjustments necessary to accomplish the reduction, based upon their experience. The State ACP Development Group consists of the State ASC Committee, including the State Director of Extension; the State Conservationist of the Soil Conservation Service; and the Forest Service official having jurisdiction of farm forestry in the State. The President of the Land Grant College and the State Director of the Farmers Home Administration are invited to designate representatives to counsel with this group in the formulation of the State program. Also, representatives of the State Soil Conservation Committee (Board or Commission); the State Agricultural Extension Service; and other State and Federal Agricultural agencies are invited to participate in the deliberations on the State programs. The county ACP Development Group consists of comparable agency representatives at the county level.

It is planned to distribute 1961 program funds among States on the basis of the same conservation needs formula used in past programs.

CHANGES IN LANGUAGE

The estimates include proposed changes in the language of this item as follows (new language underscored; deleted matter enclosed in brackets):

- * * * Provided, That not to exceed \$26,832,950 of the total sum provided under this head shall be available during the current fiscal year for administrative expenses for carrying out such program, the cost of aerial photographs, however, not to be charged to such limitation; but
- 1 not more than [\$5,424,200] \$5,458,900 shall be transferred to the appropriation account "Administrative expenses, section 392, Agricultural Adjustment Act of 1938": * * * Provided further, That such amounts shall be available for administrative expenses in connection with the formulation and administration of the [1960] 1961 program of soil-building and soil- and water-conserving practices, under the Act of February 29, 1936,
 - 2 as amended (amounting to [\$250,000,000] \$100,000,000, including administration, and no participant shall receive more than \$2,500, except where the participants from two or more farms or ranches join to carry out approved practices designed to conserve or improve the agricultural
 - 3 resources of the community): [Provided further, That no change shall be made in such 1960 program which will have the effect in any county, of restricting eligibility requirements or cost-sharing on practices included in either the 1957 or the 1958 programs, unless such change shall have been recommended by the county committee and approved by
 - 4 the State committee: Provided further, That the proportion of the State fund initially allocated to any county for the 1960 program shall not be reduced from the distribution of such fund for the 1958 program year:]
- * * *

In addition to the usual changes in year dates applicable to the program covered by the appropriation and its period of availability, the estimates include proposed changes in the language of the item as follows:

The first change increases the amount which may be transferred to the appropriation account "Administrative expenses, section 392, Agricultural Adjustment Act of 1938" from \$5,424,200 to \$5,458,900 to meet employee health benefit costs under Public Law 86-382. The total employee health benefit cost of \$37,392 for the transfer to section 392 can be offset by savings of \$2,692, resulting in the net increase of \$34,700 required. A full explanation of the health benefit cost estimates appears in the "Preface" at the beginning of the Explanatory Notes.

The second change reflects a proposed authorization of \$100 million for the 1961 program. An explanation concerning the 1961 program follows the project statement in these justifications.

The third change would eliminate the proviso inserted by the Congress in the fiscal year 1960 Agricultural Conservation Program language which places conditions upon effecting certain program changes at the State and National levels. It is essential that the Secretary, who is responsible for administration of the program, have authority to make needed changes for improvement in the program to assure that the best interest of the farmers and the public are properly served. It has been the policy for several years to provide for an annual review of the Agricultural Conservation Program, at State and county levels. It is made by State and county ASC committees, representatives of the Forest Service, the Soil Conservation Service, and other agricultural agencies. The recommendations of these State and county groups are considered by the Department in developing the national program. However, it is not believed that

State and county authority in program matters should preclude the Secretary's opportunity to make desirable changes to make the program more effective and better serve the public interest. It is believed that the Congress should authorize program adjustments as conditions change, whether they be restrictive or nonrestrictive, and that such changes should be initiated at either the National, State, or county level.

The fourth change would eliminate the proviso inserted by the Congress which places restrictions on the initial distribution of ACP funds among counties. This restriction should be eliminated because it deprives every State committee of the authority to make any changes from 1958 (increase or decrease) in the proportion of the State fund initially allocated to any county. As conditions between counties change the need for ACP assistance changes.



STATUS OF PROGRAM

Conservation is Everybody's Business

Enough good agricultural soil and water is essential to every citizen in our expanding population and economy, now and in the future. The food, fiber, and shelter that our farms produce - about 70 percent of the raw produce in our economy - provide not only most of the essentials for the living of all our people but also a major part of the business and commerce that furnishes the livelihood for the Nation's nonfarm population. Because of their interest in food, fiber, and shelter and the continued healthy economy, nonfarm people have perhaps an even greater interest in conservation of soil and water resources than farmers themselves.

Conservation Costs Before it Pays

Farm practices that conserve agricultural soil and water resources are costly. They require an initial outlay of capital to install and many of them result in a reduction in farm income and an increase in the amount of expenditures for farm operations. In the past few years the economic phase of conservation work has been receiving increased attention. Several recent studies have revealed some of the reasons why farmers are often reluctant to adopt conservation systems of farming, even though it is recognized that such a system will eventually result in increased farm income. These studies show that in addition to the substantial initial investment, there is usually a loss of immediate income when a conservation system of farming is adopted. They also show that returns which can be expected from some types of needed conservation measures (for example, terrace systems, erosion control structures and certain forestry improvement measures) will not equal their cost for a long time even though they may be necessary to prevent irreparable loss of soil resources and to insure vital water resources and supplies. It is shown that there are greater risks in some types of needed work (such as contour farming or the establishment of soil-saving cover in some areas) than farmers and lenders are generally willing to assume.

Farmers and the Public Join their Resources

Because of their inseparable interests and mutual interdependence, farmers and the public have recognized the necessity of jointly bringing their resources to bear on problems in the field of soil, water, and woodland conservation. Federal and State governments have sought and continue to seek the best methods of expressing this essential partnership. Research and experimental work have developed and are developing means by which soil and water resources can be conserved. Educational work is teaching the value of and need for conservation effort. Technical services help determine the conservation measures that are needed and furnish engineering and other professional assistance to correctly install them. Federal cost-sharing by the Agricultural Conservation Program and similar public efforts for special situations help overcome the economic barriers to carrying out conservation measures. The basic purpose of the Agricultural Conservation Program is to afford a means by which all the people may bear a part of

the costs of those measures that would not otherwise be carried out at the rate needed to meet the public interest. It assists farmers to protect the public's interest in the Nation's soil and water resources by sharing with individual farmers and ranchers the cost of carrying out soil-building and soil-and-water-conserving practices more rapidly and to a fuller extent than would be practicable through usual farm management practices. The program, which is applicable to all farmland except some-federally-administered noncropland, helps insure continued abundant production for all of the people of the country.

The Program is Developed By Local People

Development of the Agricultural Conservation Program begins at the local or county level. The Agricultural Stabilization and Conservation county committee, with the assistance of the County Extension Agent and representatives of the Soil Conservation Service, Forest Service, and other local agencies interested in conservation, make recommendations to the State ACP development group. These recommendations are used as the basis to formulate joint recommendations of the agencies interested in conservation to the Agricultural Conservation Program Service in Washington.

From these recommendations, the Agricultural Conservation Program Service, the Commodity Stabilization Service, Soil Conservation Service, and Forest Service develop and recommend to the Secretary a national program. State and county committees then develop their programs within the structure of the national program authorized by the Congress and approved by the Secretary.

The Program is Administered Locally

The Agricultural Conservation Program is administered locally by Agricultural Stabilization and Conservation county committees which are composed of resident farmers elected by farmers they serve. County Committees are supervised by Agricultural Stabilization and Conservation State committees composed of resident farmers appointed by the Secretary of Agriculture. The local County Agent is ex officio a member of the county committee and the State Director of Extension holds a like position on the State committee.

State, county and community committeemen are assigned the responsibility for the field administration of the program and work directly with farmers in utilizing program assistance in an effort to get the greatest volume of conservation performed on the land by the farmers themselves. The responsibility for technical determinations in the field regarding designated permanent type practices is assigned to the Soil Conservation Service, except for forestry practices, for which responsibility is assigned to the Forest Service.

1959 Program Again Emphasized Conservation in Land-Use Adjustments and Land Treatment Conservation Measures Within Watersheds

The Department carried out the 1959 Agricultural Conservation Program consistent with the authorization contained in the Department of Agriculture and Farm Credit Administration Appropriation Act, 1959. The Department continued the policy of directing program emphasis toward but not limiting assistance to, enduring practices which are essential in the public interest and which farmers or ranchers would not carry out to the desired extent with their own resources, and to practices needed to meet the conservation problems on land being shifted out of production.

To illustrate the function and economic effect of the Agricultural Conservation Program in land-use adjustment, the program has shared the cost with farmers on establishing about 22 million acres of vegetative cover, including tree cover, during the five years 1954-58. A high percentage of this land was cropland producing at an intensive level.

Also, the Agricultural Conservation Program has been instrumental in furthering the objectives and accomplishments of authorized watershed programs. For example, during the past years, 1955-1958, over \$29 million of ACP funds were used to share costs of the land treatment conservation measures within the boundaries of the 11 approved flood prevention watersheds, 55 pilot watersheds in which operations are being conducted under Public Law 46, and watersheds authorized for operations under Public Law 566. These costs were shared on from about 34,000 farms in 1955 to about 40,000 in 1958. In the case of the Public Law 566 watersheds included in these data, the number of watersheds increased from 32 (with 908 farms participating in ACP in 1955) to 124 (with 8,492 farms participating in ACP) in 1958.

States were authorized to operate the 1959 Program concurrently with the 1958 Program in the fall of 1958. Under concurrent programs, State programs for two different years are in operation during the overlapping period of time authorized by the Congress and during which practices performed are eligible for cost-sharing under either program but not both programs.

The Program for 1960

The 1960 program is the same as the 1959 National Agricultural Conservation Program, except for changes made for clarification of program provisions or to permit increased operating efficiency. Consistent with the provision in the Department of Agriculture and Farm Credit Administration Appropriation Act, 1960, no change has been made in the 1960 National program which will have the effect of restricting eligibility requirements or cost-sharing on practices included in either the 1958 or 1959 program. Also 1960 initial county allocations were made in the same proportion as 1958 initial county allocations.

Authority for local development and adaptation of the program continues. There is also encouragement for modifications of regular practices to meet local problems. Under this authority, further emphasis is being given to the development or adaptation of the program to help meet continuing needs for (1) sound land-use adjustment, (2) land treatment measures in special watershed programs, and (3) dealing with special farm problems in depressed agricultural areas. In addition, there is continued the provision for the development of new practices to meet new or unusual conservation problems.

The maximum Federal cost-share limitation remains at \$2,500, the same as for 1959.

The 1958 Program Accomplished Much Conservation

Funds available for program assistance, after estimated costs of administration are deducted from the maximum authorization, are distributed among States in accordance with their conservation needs, except for the minimum allotment provision contained in Section 15 of the Soil Conservation and Domestic Allotment Act, as amended. Funds for the Naval Stores Conservation Program, cost of aerial photography, program printing, and transfers to the Treasury Department are subtracted from the amount available for program assistance before the conservation needs formula is applied. The amount for Naval Stores has been determined in the same manner since 1948 and is based on the need for assistance under the Naval Stores Conservation Program as related to the total funds available for cost-sharing assistance to farmers.

Program Data

Participation under the 1958 Agricultural Conservation Program

Item	Unit	Total a/	Participating a/	Percentage of participation
Farms	Number	5,294,090	1,083,706	20
Farm land	1,000 acres	1,224,629	402,214	33
Cropland	1,000 acres	477,151	157,904	33
Noncrop pasture and range	1,000 acres	551,923	181,940	33

a/ Includes the United States, Puerto Rico, the Virgin Islands, and data relative to the Supplementary (Emergency) Agricultural Conservation Program. Excludes the Naval Stores Conservation Program.

Extent of Selected Conservation Measures Performed Under the 1958 Agricultural Conservation Program and Accomplishments Under the Agricultural Conservation Programs - 1936-1958. Includes Supplementary (Emergency) Agricultural Conservation Programs.

Practice	Unit	Extent under 1958 program <u>1/</u>	Total accomplishments 1936-1958 <u>1/</u>
Dams and reservoirs <u>2/</u>	1,000 struc.	62	1,580
Standard terraces	1,000 acres	356	23,893
Diversion and spreader terraces ..	Mile	4,826	117,447
Permanent sod waterways	1,000 acres	49	594
Stripcropping	1,000 acres	486	109,698
Leveling to conserve irrigation water and control erosion	1,000 acres	346	6,501
Drainage	1,000 acres	1,645	36,899
Tree planting	1,000 acres	324	2,273
Timber stand improvement	1,000 acres	321	1,629
Liming materials applied	1,000 tons	16,845	391,380
Other vegetative cover	1,000 acres	12,662	751,744
Control of competitive shrubs on range or pasture	1,000 acres	1,494	38,377

1/ Includes completed measures only.

2/ Includes storage-type structures for erosion control, irrigation water, livestock water.



(b) Emergency Conservation Measures

PROJECT STATEMENT

Project	1959	1960 (estimated)	1961 (estimated)
Emergency cost-sharing assistance to			
farmers and ranchers	\$2,221,495	\$5,000,000	\$5,000,000
Unobligated balance carried forward .	15,856,254	10,856,254	5,856,254
Unobligated balance brought forward .	- -	-15,856,254	-10,856,254
Reappropriation	-18,077,749	- -	- -
Appropriation or estimate	- -	- -	- -

Program for 1960 and 1961

These funds are available only for the rehabilitation of land damaged by natural disasters. The estimated obligations reflected above of \$5,000,000 during each of the fiscal years 1960 and 1961 are therefore necessarily tentative, since actual use of the funds will be contingent upon natural disasters and resultant emergency needs which cannot accurately be forecast in advance.

Assistance to farmers is available only when natural disasters create new conservation problems which (1) if not treated, will impair or endanger the land, (2) materially affect the productive capacity of the land, (3) represent damage which is unusual in character and, except for wind erosion, is not the type which would recur frequently in the same area, and (4) will be so costly to rehabilitate that Federal assistance is or will be required to return the land to productive agricultural use.



Since 1957, the Congress has appropriated a total of \$24 million for cost-sharing assistance to farmers for carrying out approved emergency conservation measures. The Second Supplemental Act, 1959, Public Law 85-766 extended the availability of unobligated balances of these funds until expended.

Four conditions are set forth in the appropriation act (P.L. 85-58) under which emergency funds may be used to treat new conservation problems created by natural disasters. The problems must be such that (1) if not treated, will impair or endanger the land, (2) they materially affect the land's productive capacity, (3) they represent damage which is unusual in character and, except for wind erosion, is not the type which would recur frequently in the same area, and (4) they will be so costly to rehabilitate the land that Federal assistance is or will be required to return the land to productive agricultural use.

Designation of eligible areas and allocation of emergency funds are made by the Secretary of Agriculture based upon recommendations submitted through USDA State and County Disaster Committees and upon other available information, including findings and recommendations of the USDA (National) Disaster Committee.

Cost-sharing assistance under the 1957, 1958, and 1959 programs has been authorized primarily for rehabilitating farmlands damaged by flood. Assistance has been provided for the following types of work:

1. Rehabilitating farmlands which, as a result of flood waters, have suffered major damage such as deep gullying; heavy deposits of sand, gravel, or other debris; severe scouring by flood water; stream bank erosion; formation of pot holes; damage to dams, dikes, and ditches.
2. Rehabilitating existing drainage or irrigation systems damaged by flood waters by removing heavy deposits of silt or other material essential to restoring the system to an operating condition where farmlands served by the system could not otherwise be put to normal agricultural use.
3. Removing water from land where a serious drainage problem exists as a result of flood and involving restoration of the land to its normal agricultural use by installing new drains.
4. Restoring terraces, farm ponds, and erosion control structures damaged by excessive rains or runoff.

The statement below shows by State, the number of designated disaster counties and the amounts allocated for cost-sharing assistance.

Allocations as of November 30, 1959

State	1957 Program		1958 Program		1959 Program	
	Counties designated	<u>1/</u> Allocation	Counties designated	<u>1/</u> Allocation	Counties designated	Allocation
	<u>Number</u>	<u>Dollars</u>	<u>Number</u>	<u>Dollars</u>	<u>Number</u>	<u>Dollars</u>
Alaska	---	---	1	30,000		
Arkansas	19	36,863	19	206,701		
Indiana	12	51,213	12	192,070	15	231,000
Kansas	2	4,135	2	13,441	1	25,000
Kentucky	31	33,538	31	465,000		
Louisiana ...	7	6,893	7	116,365		
Minnesota ...	9	10,330	9	---		
Missouri	21	302,608	21	845,407	24	1,119,000
New Mexico ..	---	---	1	48,000		
Oklahoma	21	226,447	21	143,571		
Oregon	2	339,411	2	127,907		
Texas	3	23,350	31	2,034,520	4	834,000
Washington ..					1	75,000
Total	127	1,034,788	157	4,222,982	45	2,284,000

1/ Adjusted to reflect cost-sharing for practices actually installed.

STATEMENT OF OBLIGATIONS UNDER ALLOTMENTS AND OTHER FUNDS

(Includes only those amounts which, by November 30, 1959, were actually received or programmed for 1960 or 1961. Since work for other agencies is performed on a service basis, at the request of those agencies and for their benefit, it is not practicable to estimate in advance the amounts to be received in most cases.)

Item	: : Obligations, : 1959	: Estimated : Obligations, : 1960	: Estimated : Obligations, : 1961
Allotments from:	:	:	:
Conservation reserve program,	:	:	:
Commodity Stabilization Service	\$20,558	\$30,000	\$30,000
Great Plains Conservation Program,	:	:	:
Soil Conservation Service	9,072	21,424	21,424
Total, Allotments	29,630	51,424	51,424
Obligations Under Reimbursements From	:	:	:
Government and Other Sources:	:	:	:
Agricultural Conservation Program:	:	:	:
For sale of aerial photographs ...	444,000	444,000	444,000
TOTAL OBLIGATIONS UNDER ALLOTMENTS	:	:	:
AND OTHER FUNDS	473,630	495,424	495,424



AGRICULTURAL MARKETING SERVICE

Purpose Statement

The Agricultural Marketing Service was established by the Secretary of Agriculture on November 2, 1953 under the authority of Section 161 Revised Statutes (5 U.S.C. 22), Reorganization Plan No. 2 of 1953, and other authorities. The Service aids in advancing the orderly and efficient marketing and the effective distribution of products from the Nation's farms. The domestic marketing and distribution functions of the Department are centered in this Service. The Administrator of the Service is also responsible for the coordination of all statistical work of the Department.

The Agricultural Marketing Service carries on the following principal programs:

1. Research and Agricultural Estimates. These functions include
 - a. marketing research directed toward the development of practical answers to problems encountered in moving agricultural products from the farm to the consumer, including expanded outlets for new and established products, reduced costs, improved product quality, and improved market equipment and facilities;
 - b. analyses of the economic situation and outlook for farm products, including factors affecting price, supply, and consumption; and statistical studies on farm population, costs, prices and income in their relation to agriculture including causes for variations and trends;
 - c. crop and livestock estimates including acreages, yields, production, stocks, values and utilization of farm crops; numbers production, value and utilization of livestock and livestock products and such related data on prices received and paid by farmers.
2. Marketing Services. These activities contribute to the efficient and orderly marketing of agricultural commodities through
 - a. Market news service which provides timely and reliable market reports on all major agricultural commodities to help farmers determine when, where, and at what price to sell their products.
 - b. Inspection, grading, classing, and standardization services to develop standards of quality and condition for agricultural commodities and to use them in providing an impartial inspection, classing, and grading service.
 - c. Freight rate service to assist in obtaining and maintaining equitable transportation rates and services on farm supplies and products.
 - d. Regulatory activities covering administration of laws aimed at protecting farmers and others from financial loss resulting from deceptive, careless, and fraudulent marketing practices.

3. Payments to States. The Service administers the matched fund program for marketing activities carried out through cooperative arrangements by State Departments of Agriculture, Bureaus of Markets, and similar State agencies.
4. School Lunch Program. Federal assistance is provided to States and Territories for use in serving nutritious midday meals to children attending schools of high school grades or under in order to improve the health and well-being of the Nation's children, and broaden the market for agricultural food commodities.
5. Special Milk Program. Assistance is provided to States for making reimbursement payments to eligible schools and child-care institutions which inaugurate or expand milk service in order to increase the consumption of fluid milk by children.
6. Removal of Surplus Agricultural Commodities and Marketing Agreements and Orders. These activities directly or indirectly tend to maintain prices received by farmers and establish and maintain orderly marketing conditions through
 - a. removing from the market surplus agricultural commodities through purchase and donation to eligible recipients, export and diversion payments, and distribution of Commodity Credit Corporation donated commodities to eligible outlets authorized under Section 416;
 - b. administration of marketing agreements and orders;
 - c. cooperation with the food trade and others to encourage greater consumption of abundant foods.
7. Research under Sections 104(a) and (k) of P. L. 480. The Service reviews and appraises for technical adequacy Agricultural Marketing Research projects beneficial to the United States which can be advantageously conducted overseas through grants and contracts with foreign research institutions and universities. These projects are carried out with foreign currencies under the authority of sections 104(a) and (k) of Public Law 480, the Agricultural Trade Development and Assistance Act of 1954, as amended. The dollar expenses of the AMS in connection with this work are paid from the appropriation "Marketing research and agricultural estimates." A full discussion of the marketing research activities conducted under Public Law 480 is included in these Explanatory Notes under the appropriation "Salaries and expenses (Special foreign currency program), Agricultural Research Service."
8. Work Performed for Others. The Agricultural Marketing Service also performs other services for Federal, State and private agencies, on a reimbursable or advance payment basis. These include among others the ICA sponsored foreign visitor training program, food planning for defense emergency conditions, and administration of Section 708 of the National Wool Act of 1954 dealing with advertising and sales promotion programs.

The Agricultural Marketing Service maintains its central office in Washington, D. C., but a large part of the program is carried on through State offices for agricultural estimates, and functional field branch offices of the several Washington commodity and functional divisions located in over 225 cities and towns in the various States, Puerto Rico, and Cuba.

On November 30, 1959 (excluding the offices of the Milk Marketing Administrators) there were approximately 8,712 full-time employees, distributed about 1,989 in the D. C. metropolitan area and the remainder in the field. In addition there were about 1,184 part-time and intermittent employees primarily in the field. A substantial portion of Agricultural Marketing Service employment is financed through revenue from fees, charges, or other assessments and through joint financing or other arrangements with States and private cooperators.

	<u>Appropriated, 1960</u>	<u>Budget Estimates, 1961</u>
Appropriated funds:		
Marketing research and agricultural estimates	\$15,412,500	\$16,571,500
Marketing services	26,054,600	26,570,400
Payment to States, Territories and Possessions	1,195,000	1,195,000
School lunch program a/	<u>153,657,248</u>	<u>150,000,000</u>
Total (excluding permanent appropriations)	<u>196,319,348</u>	<u>194,336,900</u>

a/ Includes transfers of \$43,657,248 and \$40,000,000 in 1960 and 1961, respectively, from Section 32 funds for purchase of agricultural commodities for distribution to schools participating in the national school lunch program.



Summary of Appropriations, 1960, and Estimates, 1961

Appropriation Item	: Appropriated, 1960	: Budget Estimates, 1961	: Increase (+) or Decrease (-)
Marketing research service:			
Marketing research and agricultural estimates	\$15,412,500:	\$16,571,500:	+\$1,159,000
Marketing services	26,054,600:	26,570,400:	+515,800
Payments to States, and Possessions	1,195,000:	1,195,000:	- -
School Lunch Program a/	153,657,248:	150,000,000:	-3,657,248
Perishable Agricultural Commodities Act Fund (permanent) b/..	670,000:	670,000:	- -
Removal of surplus agricultural commodities (30% of customs receipts - permanent) c/	200,302,475:	270,661,000:	+70,358,525
Total	397,291,823:	465,667,900:	+68,376,077
Deduct permanent appropriations (shown in detail above)	200,972,475:	271,331,000:	+70,358,525
Total (excluding permanent appropriations)	196,319,348:	194,336,900:	-1,982,448

- a/ Includes \$43,657,248 and \$40,000,000 transfer from "Removal of Surplus agricultural commodities" in fiscal years 1960 and 1961 respectively.
- b/ In addition, an unobligated balance of \$388,033 is available in fiscal year 1960, and \$308,733 is estimated to be carried forward into 1961.
- c/ Excludes transfers of \$51,143,890 and \$47,339,000 in 1960 and 1961 respectively. In addition, an unobligated balance of \$300,000,000 is available in fiscal year 1960 and \$300,000,000 is estimated to be carried forward into 1961.

Note: The above tabulation does not include the availability of funds from the Commodity Credit Corporation of \$81,000,000 in fiscal year 1960 and \$84,000,000 in fiscal year 1961 for reimbursements to eligible schools and child-care institutions participating in the Special Milk program.

TRANSFERS IN 1961 ESTIMATES

The House Report on the 1960 Appropriation Bill provided \$50,000 for cotton quality evaluation at Clemson, S. C., in the item "Salaries and expenses, Agricultural Research Service". This amount was included in that appropriation as enacted. Since the cotton quality evaluation work at Clemson, South Carolina, is conducted by the Agricultural Marketing Service under the appropriation "Marketing research and service, Agricultural Marketing Service" the \$50,000 is being transferred from ARS to AMS in 1960 under provisions of Section 601 of the Economy Act of 1932 (31 U.S.C. 686).

The 1960 Appropriation Act included \$18,000 which had been inserted by the House Subcommittee under the "Marketing services" subappropriation for cling peach production estimates and for crop and livestock reporting in Alaska. Since these items appropriately fall under the subappropriation "Marketing research and agricultural estimates", the \$18,000 was transferred to that subappropriation in 1960 under authority of 5 U.S.C. 572.

To effect the transfer of these funds to the proper appropriations and sub-appropriations, the 1961 Budget proposes transfers in the estimates as follows:

Item and Amount	:	From	:	To
Cotton quality evaluation work at Clemson, S. C., \$50,000	:	Salaries and expenses, Agricultural Research Service	:	Marketing research and services, Agricultural Marketing Service
Cling peach production estimates and crop and livestock reporting in Alaska	:	Marketing services, Marketing research and services, Agricultural Marketing Service	:	Marketing research and agricultural estimates, Marketing research and services, Agricultural Marketing Service.

(a) Marketing Research and Service

	Marketing Research and Agricultural Estimates	Marketing Services	Total
Appropriation Act, 1960	\$15,344,500	\$26,072,600	\$41,417,100
Transfers in 1961 estimate:			
a. From "Salaries and expenses, Agricultural Research Service, Research" for cotton quality research	+50,000	- -	+50,000
b. Between the two subappropria- tions for cling peach produc- tion estimates and crop and livestock reporting in Alaska	+18,000	-18,000	- -
Base for 1961	15,412,500	26,054,600	41,467,100
Budget Estimate, 1961	16,571,500	26,570,400	43,141,900
Increase	+1,159,000	+515,800	+1,674,800

SUMMARY OF INCREASES AND DECREASES, 1961

Marketing research and agricultural estimates:

To develop improved methods and instruments for use in quality grading of agricultural products	+266,700
To step up economic studies and market testing of new and improved uses for agricultural products	+70,500
To appraise the impact of vertical integration and other changes on marketing structure	+75,400
To develop methods for reducing deterioration of agricultural products in marketing channels ..	+50,200
To expand transportation and facilities studies to meet increased demands for data and technical assistance ...	+40,400
To initiate the long-range program to improve crop and livestock estimating services	+502,400
To provide for agricultural estimating services in Hawaii and Alaska .	+50,400
For employee health benefit costs pursuant to P.L. 86-382	+103,000
Subtotal	+1,159,000

Marketing services:

To provide for more effective supervision of a greatly expanded volume of grain inspection by licensees	+85,800
To strengthen enforcement of the Federal Seed Act as amended August 1, 1958	+50,450
To provide for more adequate enforcement of the Packers and Stockyards Act, as amended	+216,450
Decrease due to providing a direct appropriation to the General Services Administration for certain leasing costs previously paid from this appropriation	-45,200
For employee health benefit costs pursuant to P.L. 86-382	+208,300
Subtotal	+515,800
Total increase, Marketing research and service	+1,674,800

PROJECT STATEMENT

Project	1959	1960 (estimated)	Increase or Decrease		1961 (estimate)
			Health Bene- fit Costs (P.L.86-362):	Other	
1. Marketing research and agricultural estimates:					
a. <u>Marketing research</u>					
(1) Market devel- opment	\$986,499:	\$826,800:	+\$5,100	+\$90,700	\$922,600
(2) Market organi- zation and costs:	2,255,964:	2,304,500:	+14,700	+95,600	2,414,800
(3) Improving and evaluating prod- uct quality ...	2,539,008:	2,514,200:	+16,100	+276,500	2,806,800
(4) Marketing transportation and facilities	1,696,975:	1,698,000:	+9,600	+40,400	1,748,000
Total, Marketing research	7,478,446:	7,343,500:	+45,500	+503,200(1):	7,892,200
b. <u>Economic and statistical analysis:</u>					
(1) Price, supply, and consumption :	872,895:	884,200:	+6,200	- -	890,400
(2) Farm income . :	353,526:	398,800:	+2,700	- -	401,500
(3) Farm population	329,532:	349,900:	+1,700	- -	351,600
Total, Economic and statistical analy- sis	1,555,953:	1,632,900:	+10,600	- -	1,643,500
c. <u>Crop and live- stock estimates:</u>					
(1) Field crops . :	1,971,766:	2,021,200:	+14,800	+531,700	2,367,700
(2) Fruits and vegetables	915,275:	953,200:	+7,100	+14,100	974,400
(3) Livestock and poultry	1,564,993:	1,724,300:	+13,000	+112,500	1,849,800
(4) Dairy	637,770:	652,100:	+4,900	+32,900	689,900
(5) Agricultural prices	925,325:	394,300:	+6,200	+10,500	911,000
(6) Enumerative surveys, cold storage, farm employment and wages	185,161:	191,000:	+900	+51,100	243,000
Total, Crop and livestock estimates	6,200,290:	6,436,100:	+46,900	+552,800(2):	7,035,800
Total, Marketing research and agri- cultural estimates	15,234,639:	15,412,500:	+103,000	+1,056,000	16,571,500

(Continued on next page)

Project	1959	1960 (estimated)	Increase or Decrease		1961 (estimated)
			Health Bene-	Other	
			fit Costs (P.L. 86-362)		
2. Marketing services:					
a. <u>Market news service:</u>					
(1) Cotton and cottonseed	\$440,936:	\$443,300:	+\$3,300	- -	\$446,600
(2) Dairy and poultry products:	865,370:	916,200:	+4,700	- -	920,900
(3) Fruits and vegetables	1,400,955:	1,447,800:	+9,000	- -	1,456,800
(4) Grain, hay, feed, etc.	285,379:	283,400:	+1,400	- -	284,800
(5) Leased wire service	406,042:	435,700:	+1,500	- -	437,200
(6) Livestock, meats and wool	1,219,006:	1,235,600:	+9,500	- -	1,245,100
(7) Naval stores	21,888:	22,800:	+100	- -	22,900
(8) Tobacco	204,955:	214,200:	+1,800	-1,200	214,800
Total, Market news service	4,844,531:	4,999,000:	+31,300	-1,200(3):	5,029,100
b. <u>Inspection, grading, classing and standardization .</u>					
(1) Cotton and cottonseed	2,476,624:	2,551,200:	+19,300	-41,400(3):	2,529,100
(2) Dairy products:	71,937:	70,300:	+600	- -	70,900
(3) Fruits and vegetables	759,532:	744,000:	+5,600	- -	749,600
(4) Grain (U.S. Grain Standards Act)	2,006,291:	2,012,800:	+15,100	+85,800(4):	2,113,700
(5) Livestock, meats, and wool	359,674:	324,400:	+2,200	- -	326,600
(6) Naval stores	31,193:	30,800:	+100	- -	30,900
(7) Poultry products grading	277,345:	278,100:	+2,100	- -	280,200
(8) Poultry products inspection	6,057,891:	10,203,000:	+93,000	- -	10,296,000
(9) Rice, hay, beans, etc. ...	74,634:	73,200:	+600	- -	73,800
(10) Tobacco	1,941,435:	1,907,200:	+18,400	-2,600(3):	1,923,000
Total, Inspection, grading, classing, and standardization	14,056,556:	13,195,000:	+157,000	+41,800	13,393,800
c. <u>Freight rate services</u>	179,961:	190,000:	+1,200	- -	191,200

(Continued on next page)

Project	1959	1960 (estimated)	Increase or Decrease		1961 (estimated)
			Health Bene-	Other	
			fit Costs (P.L. 86-362)		
d. <u>Regulatory ac-</u>					
<u>tivities:</u>					
(1) Federal Seed					
Act	\$285,593:	\$288,100:	+\$2,100	+\$50,450	\$340,650
(2) Naval stores					
and tobacco ex-					
port permits .	18,959:	19,600:	+100	- -	19,700
(3) Packers &					
Stockyards Act	1,085,438:	1,387,400:	+9,700	+216,450	1,613,550
(4) Standard Con-					
tainer Acts ..	12,664:	12,600:	+100	- -	12,700
(5) Warehouse Act:	848,095:	862,500:	+6,400	- -	868,900
(6) Perishable					
Agricultural					
Commodities,					
Produce Agency,					
and Export					
Apple and Pear					
Acts	25,400:	25,400:	- -	- -	25,400
Total, Regulatory					
activities	2,276,149:	2,595,600:	+18,400	+266,900(5):	2,880,900
e. <u>Administration</u>					
<u>and coordination</u>					
<u>of State payments:</u>	69,658:	75,000:	+400	- -	75,400
Total, Marketing					
services	21,426,855:	26,054,600:	+208,300	+307,500	26,570,400
Subtotal a/....	36,661,544:	41,467,100:	+311,300	+1,363,500	43,141,900
Unobligated balance	1,305,156:	- -	- -	- -	- -
Total employee health:					
benefit costs					
(P.L. 86-382)	[- -]	[- -]	[+311,300]	[+8,700]	[+320,000]
Total available or					
estimate	37,966,700:	41,467,100:	+311,300(6):	+1,363,500	43,141,900
Transfer in the 1961					
estimates from					
"Salaries and ex-					
penses, Agricultur-					
al Research Serv-					
ice, Research" ...	- -	-50,000:			
Transferred from					
"Conservation re-					
serve program,					
Commodity Stabili-					
zation Service" ..	-3,112,700:	- -			
Total appropriation					
or estimate	34,854,000:	41,417,100:			

a/ Represents obligations. Applied costs for 1959 are \$36,571,392. The difference of \$90,152 reflects, primarily, a reduction of prior year obligations.

INCREASES AND DECREASES

An increase of \$1,056,000 under the subappropriation "Marketing Research and Agricultural Estimates" consisting of:

(1) An increase of \$503,200 under the project "Marketing Research" to find solutions to urgent problems dealing with the marketing system for agricultural products.

Production efficiency is forcing major alterations in the organization structure for marketing agricultural products. The growth of marketing firms to take advantage of economies and efficiencies arising out of large scale operations, accompanied by new combinations of functions and activities, has concentrated decision making into fewer hands. This broadened integration is only one of the comprehensive developments which in recent years have profoundly affected the bargaining position of farmers and the competitive relationships between businesses handling farm products.

Rising costs of labor, transportation, finance, and handling make essential the exploration of every means to achieve greater marketing efficiencies. Farm products are expected to continue to be in abundant supply and ways to sell the fruits of agricultural labor need to be found. The advantages of abundance and production efficiencies may well be lost unless broader markets and greater distribution efficiencies are discovered.

In its broad program for 1961, AMS proposes increases for agricultural marketing research directed, specifically, toward:

(a) Developing improved methods and instruments for use in the quality grading of agricultural products (+\$266,700)

This increase is distributed by activities as follows:

Market development	\$ 40,400
Improving and evaluating product quality	226,300

Need for Increase: Standards and methods for grading services intended to facilitate buying, selling, and pricing on the farm and in the market place need adjustment in light of new technologies. The scientific base upon which grades and standards are established must be strengthened and the effectiveness of grading services improved. The objectives of the proposed research are to devise reliable methods that can be quickly applied to arrive at grade and thereby facilitate competitive pricing and trading.

Plan of Work: Biological and physical research emphasis would be directed toward developing (1) objective methods of determining the quality of pork, beef, and lamb to improve grades and standards; (2) spinning and instrumentation research to detect the nature and extent of damage to fibers resulting from drying, cleaning and

ginning; (3) improved methods and equipment for sampling grain in loaded cars and elevators; (4) methods to determine the edible quality of products by nondestructive methods; and (5) practical instruments to indicate important quality characteristics for use in improving present grades and standards.

Also, studies would be conducted to determine what the consumer wants and expects in the way of quality. This information is essential for maintaining useful standards for grade and for providing quality guides to breeders, feeders, and the trade. These studies will be planned in consultation with commodity divisions responsible for grades and standards and will be conducted in the research division laboratories, with the cotton quality work to be done at the recently established Clemson laboratory.

(b) Stepping up market testing of new and improved uses for agricultural products and related economic studies (+\$70,500).

This increase is distributed by activities as follows:

Market development	\$50,300
Market organization and costs	20,200

Need for Increase: More emphasis on the development of new markets for farm products is needed in view of agriculture's ability to produce. Research on market potentials and opportunities can remove many of the roadblocks which hinder the acceptance of new or improved products by commercial firms that must be relied upon to manufacture and distribute the products. Thus, market testing of new and improved uses of agricultural products and related economic feasibility studies are types of research which cannot be neglected in developing a sound utilization research and development program and in broadening the market for agricultural products.

Economic studies of market potentials conducted before large scale laboratory research can direct the major research effort to the fields which offer the greatest possibilities for profitable work. Market pre-test studies provide indications of consumer evaluation of new products; how often they may purchase; how much they are willing to pay; and their response to promotion, merchandising, and display techniques. This research also identifies any problems associated with shelf-life, transportation, and handling. Studies of this type are often an indispensable means of closing the gap between the laboratory--pilot plant on one hand and commercial adaptation on the other.

Plan of Work: The increase requested would be used for increased work in such fields as

1. The marketing and related economic problems involved in such new products as crease-resistant cotton and wool fabrics;

2. The investigation of the economic factors concerned with marketing new industrial uses for fats and oils; and
3. Market acceptance and consumer reaction to a variety of recently developed products such as sterile concentrated milk, dried whole milk and dehydrated sweet potato flakes and new forms of packaging and preservation of different kinds of meats.

(c) Appraising the impact of vertical integration and other changes on the marketing structure (Market organization and costs +\$75,400).

Need for Increase: The trends toward more direct buying, specification buying, contract farming, custom feeding of livestock and the like, profoundly affect the bargaining position of farmers. These developments are also bringing marked shifts in the competitive relationships among businesses handling farm products. The changes wrought by vertical integration and other alterations in the marketing structure are so far-reaching that increased research is needed to determine adjustments required at all levels in the production and marketing of farm products. The continuing need to improve market news services so as to better provide the types of current data needed by growers and marketing factors, is illustrative.

Plan of Work: Since many management decisions directly affecting farming operations are largely made in the market place, basic work must be done on the marketing side of this problem. This should cover not only direct integration but equally the effects of new market practices and changes in market structure. Particular emphasis would be directed to research on

1. The economic consequences to agricultural marketing costs and margins, and marketing structure and practices of increasing concentration of ownership and control of facilities for processing and distributing farm products;
2. The effects of these developments on market outlets for farm products on the bargaining position of producers;
3. The efficiency of the pricing system; and
4. The effectiveness of marketing agreement operations in influencing the supply and marketing of farm products.

The new developments in marketing not only affect marketing organization, costs, and prices but also have a definite impact on the management of farms, use of resources, and agricultural risks. For this reason, the Agricultural Research Service recently established a pioneering research group for the study of interfirm integration in farming to work on problems of farm management, financing, tenure, and risk in vertical integration from the standpoint of the farm and directly related businesses. The fact that

the major innovations leading to integration occur in the marketing system, however, requires that marketing research on integration be conducted in close association with the studies on farm operations. Consequently, provision is made to enable AMS to participate in the research. This work would be coordinated with the relative activity carried on by the Farmer Cooperative Service with farm cooperatives.

(d) Developing methods to reduce deterioration of agricultural products in marketing channels (Improving and evaluating product quality, +\$50,200).

Need for Increase: Much of the spread between producer and consumer prices for perishable products stems from losses from mold, decay, over-ripeness, wilting, bruises, discoloration, and other defects of the product in marketing channels. In some cases, complete product destruction occurs but usually damage is such that salvage is possible, but with reduced value and utility.

Plan of Work: The proposed increase would permit expanded research in handling, packaging, storage, and transportation of agricultural products. This type of work brings substantial savings through reduction of waste and increased efficiency in marketing. For example, it is estimated that \$20 million annually in marketing costs would be saved if it were possible to prepackage fresh poultry at the packing plant rather than at the retail store which is presently done. Consumer packaging of fresh meat at the packer or wholesale level would be more efficient than the present method of packaging at the retail store. Before such procedures can be adopted, however, it is necessary to develop methods of controlling deterioration so as to maintain quality of the products when they are handled in this manner. The increase would permit some additional emphasis on this important subject.

Irradiation offers another important possibility for lengthening the storage life of some agricultural products. Although limited studies have been made in this area, larger scale tests on depth of penetration, dosage rate and effect of packaging materials and package size on effectiveness are needed before commercial adaptation is possible.

Tests will be made to determine if induced radioactivity of foods is caused by the irradiation levels used, employing equipment recently acquired for other research purposes. The dosages tolerated by the commodities to be irradiated are less than one-tenth those under question by the Surgeon General's Office and no deleterious effects are anticipated. Current research underway, sponsored by the Surgeon General, will provide answers to the questions raised regarding wholesomeness of irradiated foods. In the meantime, it is important that the promising results obtained in small-scale tests be followed by more extensive research, using equipment designed for treating commercial packages. Radioactive cobalt will be made available for this work by the Atomic Energy Commission.

(e) To expand transportation and facility studies to meet increased demands for data and technical assistance (Marketing transportation and facilities, +\$40,400).

Need for Increase: The pressure for lower cost methods of moving and handling farm products through the marketing system has stimulated interest in less expensive alternatives for transportation and modernized facilities for handling produce to and through markets. A most important transportation problem facing agriculture concerns the exemption of unmanufactured products of agriculture transported by for-hire motor trucks. Proposals for repeal or restriction of the exemption have been before most Congressional sessions since passage of the law in 1935. Yet, comprehensive information is largely lacking on the number and size of exempt haulers, types of equipment and kinds of hauling in which they are engaged, rates charged compared with those of regulated carriers, the service benefits derived from their rise, such as broadening and expanding the markets for agricultural products, and the functions of brokers and the effect of their operation upon services and rate levels.

Rising wages of labor and the difficulty in some areas of obtaining an adequate labor force made it increasingly necessary to improve the facilities used in processing and marketing agricultural products. Providing better facilities at each place in the marketing channel where products are processed and distributed should bring about increases in the volume and variety of products reaching consumers without corresponding increases in labor costs.

State agencies, industry groups, city and county organizations, transportation companies, and individual firms are more and more seeking technical assistance in planning improved marketing facilities and determining the kind of facilities needed in areas that are producing new products.

Plan of Work: The increase would be used to expand and enlarge the scope of studies made on the historical background of the agricultural exemption and its effects on two commodity groups--processed poultry, and frozen fruits and vegetables. These studies have aided in an understanding of the usefulness and importance of the exempt carrier in marketing these commodities. Additional information should be developed, however, to provide factual data on the functioning and operation of the exempt carrier in other commodity areas. The work is time-consuming and requires more funds if the objective is to be realized.

Further information concerning the costs of truck operation by private and exempt carriers is needed for those interested in entering the exempt trucking field, and for shippers considering the purchase and operation of their own trucks. Repeated demands are made for this information which would be useful in disclosing the extent of the difference in the costs and operations and those of the regulated carriers. The proposed increase would permit a start in developing and analyzing this needed information.

With regard to marketing facilities improvement, a number of recent studies have been made for particular localities--such as New York, Detroit, New Orleans and San Francisco--for which more follow-up work is required to stimulate local interests to get the recommended facilities constructed or to bring about improvements in existing facilities. The increase required would make it possible to devote more time to new studies, which cannot be undertaken under the funds presently available.

(2) An increase of \$552,800 under the project "Crop and livestock estimates" to provide for expanding the enumerative survey technique in 12 Southern States; providing for objective measurements of crop development on cotton, corn, wheat, soybeans and tobacco in 24 Southern and North Central States; and expanding the program in Alaska and Hawaii.

The rapid change taking place in American agriculture has emphasized the need for additional and more precise basic statistical information. One of the most pressing needs of the Department, the Congress, and all segments of the economy is for reliable, current statistics on the changes in the number of farms and total land in farms. These fundamental statistics are essential to many decisions in the development of agricultural policy and agricultural legislation. They are likewise basic to the strengthening of the agricultural estimating service, particularly the estimates of livestock numbers.

Another important area where current statistics are inadequate has to do with the employment and wage rates of farm workers. Another--and in some respects the most important--need is for improvement in the forecasts during the growing season. These forecasts of probable production are important market factors and the basis for many decisions that directly affect farmers' income and the entire economy.

Present sampling methods are not capable of producing sufficiently reliable information on some of these basic figures with the degree of precision that is essential to meet modern needs. The present voluntary mail reporting techniques and the methods for handling this type of report have produced valuable and reasonable accurate and useful statistics. Their inherent weakness, nevertheless, shows up in any situation where wide and rapid changes are taking place in the basic pattern. The mail questionnaire technique will continue to be an important tool of the crop and livestock reporting service. However, from the standpoint of economy and meeting the deadlines for current reports, it has been recognized for many years that to improve the accuracy of the mail reports and to provide additional needed statistics the enumeration of a probability sample of sufficient size to provide reliable information on some of these basic changes would be necessary.

The increase proposed for this project would be used specifically to (a) put into effect certain initial phases of the long-range crop and livestock estimating programs (\$502,400).

Need for Increase: Work during the past five years has demonstrated conclusively that enumeration of a probability sample on acres of crops planted, total land in farms, livestock numbers, and total

number of farms is practical from an operating standpoint where timing is of major importance. Studies have demonstrated that monthly objective measurements of crop development to permit more precise forecasts of yield during the season are likewise practical. Work on cotton, corn, wheat, soybeans and tobacco should be expanded to permit this technique to be used in the regular monthly crop reports. Yield estimates must be accurate not only because they are used in production estimates and forecasts during the season, but because of their widespread use to measure the results of research, to establish rates under the crop insurance program, and to determine acreage allotments and price support activities.

Plan of Work: The present June enumerative survey covering acreage of crops planted, livestock numbers, and farm labor in 12 Southern States would be expanded to sufficient size to produce reliable estimates, by States, for these basic factors. This would involve increasing the present sample from 1,700 to 4,200 segments in these 12 States. In addition, the objective yield work on cotton, corn, and tobacco would be expanded to provide reliable indications of average yield of each of the 12 States.

The amount requested would also permit an expansion of the objective yield measurements on corn in the North Central States to provide reliable data for estimating corn production, by State, and would allow for continuation of the objective yield work on soybeans and what in these States.

(b) provide for agricultural estimating services in Alaska and Hawaii (+\$50,400).

Need for Increase: The gaining of statehood by Hawaii and Alaska has thrown an entirely different light on the crop and livestock reporting services which should be carried on in these States.

In the 1956 Appropriation Act, Congress appropriated \$15,000 to start a cooperative crop and livestock estimating program with the Territory of Hawaii. Since that time, much progress has been made in developing the program for most commodities. In addition to the improved services for the benefit of Hawaiian producers, the reports have been increasingly important to interests on the mainland, particularly producers and handlers on the Pacific Coast. Hawaii is providing about \$60,000 a year as its contribution to the service.

This request would also provide for the establishment of a full-time crop and livestock reporting service for the State of Alaska. A survey by the U. S. Department of Agriculture, the State Agricultural Experiment Station, and the State Division of Agriculture indicates about \$20,000 per year as the Federal portion of the cost for over-all crop and livestock reporting service.

Plan of Work: This increase is proposed to more nearly meet the Department's obligations on these programs in Hawaii and Alaska. The increase would place the estimating program in Hawaii on a level more nearly comparable with that for the other States and

permit the incorporation of estimates for some of the principal Hawaiian agricultural products in the reports. The funds requested would also provide a much needed current series of agricultural prices as well as a more comprehensive estimating program on the livestock industry in the State of Hawaii.

For Alaska, the proposed increase would cover the cost of a well qualified agricultural statistician, clerical assistance, and other facilities and services necessary to the efficient conduct of the service. Some additional personnel support will probably be provided by the State Division of Agriculture as the program develops. Distances in Alaska are great and producing areas widely separated, requiring more than the normal amount of personal contact to collect the needed information.

A net increase of \$307,500 under the subappropriation "Marketing Services" composed of:

(3) A decrease of \$45,200 in the appropriation "Marketing Research and Service" under the Subappropriation "Marketing Services" due to providing a direct appropriation to the General Services Administration for certain leasing costs previously paid from this appropriation. Certain space assignment and leasing functions of the various Federal agencies were transferred to the General Services Administration under Section 1 of Reorganization Plan No. 18 of 1950. These functions are applicable only to general purpose space that may be occupied in any of 128 metropolitan areas, and include the acquiring and payment for space in buildings, the assignment and reassignment of such space, and the operation, maintenance, and custody thereof. The decrease of \$45,200 represents the cost of leasing functions which will be assumed by General Services Administration in 1961. The proposed decrease is distributed by activity as follows:

Market news service	\$1,200
Inspection, grading, classing and standardization	<u>44,000</u>
Total	45,200

(4) An increase of \$85,300 under the project "Inspection, Grading, Classing and Standardization" to provide for more effective supervision of grain inspection by licensees.

Need for Increase: Under the provisions of the U. S. Grain Standards Act, all grain sold by grade and moved in interstate or foreign commerce, from or to an inspection point, must be inspected and graded by an inspector licensed by the Department. The Department is responsible for the supervision of the grading activities of the licensed inspectors to insure reasonable accuracy and uniformity in the application of the standards established by law. In addition, the Department is also required to perform all appeal gradings requested.

Production and inspections of U. S. grain have been increasing steadily over the past several years. The facilities for Federal supervision of the inspections made by licensees under the U. S. Grain Standards Act have not kept pace with this increase. The following table points up the changes which have taken place since 1955, the last year in which increased funds were appropriated for this purpose.

	Fiscal Year			
	1955	1958	1959	1960(Est.)
Quantity of grain produced (1000 bushels)	6,416,229	7,188,089	8,415,961	8,500,000
Number of inspection points	294	325	377	390
Number of licensed inspectors	548	628	658	675
Estimated quantity of grain inspected (1000 bushels)	4,803,923	5,716,975	6,419,624	6,600,000
Total number of inspections (excludes appeals)	2,538,496	3,042,362	3,511,548	3,600,000
Inspections reviewed by Federal supervisors (includes appeals)	203,897	205,817	199,790	217,000
Percent of inspections reviewed	8.0	6.8	5.7	6.0

While the number of inspections by licensees has increased substantially the number of such inspections Federally reviewed has remained fairly constant since the number of Federal grain inspection supervisors has remained about the same. As a result, the proportion of inspections reviewed has decreased by about 25% since 1955.

Adequate supervision of licensed inspectors by Federal employees is fundamental to a sound and accurate grain inspection program. The degree of supervision which is now provided is not sufficient to assure accurate grading.

Inaccurate grading can have a serious financial impact on producers, distributors, processors and others in view of the substantial volume of product and, hence, money making up the usual transaction. This is particularly true in the large quantities involved in cargo shipments and large-scale operations such as frequently occur in the Commodity Credit Corporation programs. Moreover, the long-time interests of the grain producer are jeopardized by lack of accuracy in grading because it has an adverse effect on demand for U. S. grain in world markets.

The substantial increase in grain production in recent years, the vigorous efforts being made to develop broader foreign markets, the scope of price support programs of the Department, and the increased trading activities in grain resulting from expanded production, make it essential to strengthen the Federal supervisory staff.

Plan of Work: The Federal grain inspection supervisory staff would be expanded by 12. The additional staff would be assigned to existing port or interior offices where the need for strengthening Federal supervision appears most acute.

(5) An increase of \$266,900 under the project "Regulatory Activities" composed of:

(a) An increase of \$50,450 to strengthen enforcement of the Federal Seed Act, as amended:

Need for Increase: Public Law 85-581, approved August 1, 1958, amended the Federal Seed Act. The Department has been unable to fully meet the responsibilities added by this amendment since no additional appropriation has been made available therefor. Revised regulations have been promulgated preparatory to assuring compliance with the more stringent requirements under the amendment. A portion of the increase requested is needed to initiate a program for carrying out one aspect of the amended law--that which requires the labeling of treated seed. Under the amendment, seed treated with a substance to control disease and insects must be clearly labeled to guide the farmer and prevent improper use of the treated seed. Such seed moving into food channels could endanger lives. Until funds are provided for enforcement of this requirement, little protection will be afforded to the public by the enactment of the legislation.

The remainder of the increase is needed to relieve the increasingly heavy workload at the Minneapolis seed laboratory on mandatory testing of seed offered for importation through North Central U. S. ports of entry.

The following table indicates the change in the volume of work at this point during the last four years and the current estimate.

<u>Samples of Imported Seed Tested at Minneapolis, Minnesota</u>	
<u>Fiscal Year</u>	<u>Number of Samples</u>
1956	8,084
1957	7,339
1958	12,044
1959	12,902
1960 (Est.)	14,000

The present staff, which is already overtaxed, is not able to keep up with the increasing workload. Further, the workload at other seed laboratories has remained heavy, eliminating the possibility of adjusting the workload among the laboratories.

Plan of Work: Treated seed samples taken from interstate shipments by cooperating State seed inspectors would be delivered to the Federal seed laboratory at Beltsville, Maryland, where Federal seed technologists would examine them for compliance with the amended law and take proper action when necessary. To cope with the increased workload on imports, particularly via the North Central ports of entry, additional personnel would be stationed at the Federal seed laboratory at Minneapolis, Minnesota.

(b) An increase of \$216,450 to permit more effective administration of the Packers and Stockyards Act.

Need for Increase: The September 2, 1958, amendment to the Packers and Stockyards Act extended the jurisdiction of the Secretary to virtually all of the stockyards in the U. S. (approximately 2400 or almost 3 times as many as under the original law) and to a greatly increased number of marketing agencies and dealers operating in the country.

With the increased funds appropriated for 1960, it is anticipated that by the close of the year about 2,200 yards will be posted compared with 606 at the time the amendment was passed and 1,528 at the close of 1959. The number of registrants under the Act is expected to reach about 16,000 in 1960 as compared with 6,552 when the amendment was approved and 7,243 at the close of 1959. This is in addition to the jurisdiction over 2,300 firms operating one or more meat packing establishments throughout the United States under Title II of the Act.

The broadened scope of coverage under the Act, as amended, along with the steady increase of investigations of unfair trade practices under the provisions of Title II is resulting in a steadily increasing workload. The total number of cases expected to require formal proceedings in 1961 is estimated at 293. This is an increase of 55% compared with 1958, the last full year of operation before enactment of the amendment. In that year, 189 cases required handling. As a result of the extended jurisdiction under the Act, workload is expanding in the following areas.

1. Additional complaints and allegations are being reported of trade practices of the type which from previous cases have been determined to be violations of the Act. Each of these reports requires an investigation to determine the validity of the complaint or allegation and the action necessary. The total number of cases expected to require formal proceedings in 1961 is estimated at 256 compared with 199 in 1959.
2. Many country dealers and stockyard operators now coming under the jurisdiction of the amended Act are raising questions in regard to types of trade practices which may or may not be permitted under the Act but for which no precedent now exists. In each case a determination must be made as to whether or not these practices are permitted under the amended Act. Further, it is necessary to establish the effect of such a practice on livestock marketing and on market prices.
3. Investigations under the provisions of Title II relating to unfair practices of meat packers subject to the Act are increasing as a result of complaints from livestock producers, farm organizations, and competitors who claim to be injured by such practices. The practices complained of are frequently regional or national in scope and require extensive investigation and thorough analysis in order that appropriate conclusions or determinations can be made. The impact of

decisions resulting from such investigations is extremely important to all segments of the livestock economy and particularly to producers. In 1959 there were 24 cases requiring action. By 1961 this is expected to increase to around 37.

Unless these investigations and determinations can be made promptly, much of the protection and benefit intended for producers, the trade, and consumers under the Act will be lost.

Plan of Work: With the proposed increase, it is anticipated that all facilities and dealers requiring supervision under the Act will be posted or registered by fiscal year 1961. This supervision covers livestock marketing not only at posted markets but at all other points where those subject to the Act are doing business in interstate commerce. To accomplish this, it will be necessary to add to the present staff of marketing specialists and accountants, principally in the field, to adequately carry out the increasing workload in this greatly expanded area. Although the level of future workload with respect to complaints and questions cannot be precisely predetermined, a leveling off is not expected in the foreseeable future.

A part of the funds requested for 1961 would be utilized to expand the investigations under Title II of the Act for the purpose of eliminating these business practices that tend to restrict competition, or in any other way adversely affect prices received by producers or prices paid by consumers.

(6) An increase of \$311,300 is required to meet employee health benefit costs under P.L. 86-382, applicable to the base for 1961. A full explanation of the health benefit cost estimates appears in the "Preface" at the beginning of the Explanatory Notes.

CHANGES IN LANGUAGE

The estimates include proposed changes in the language of this item as follows (new language underscored; deleted matter enclosed in brackets):

For expenses necessary to carry on research and service * * *
Provided, That appropriations hereunder shall be available pursuant to 5 U. S. C. 565a for the construction, alteration, and repair of buildings and improvements, but unless otherwise provided, the cost of erecting any one building shall not exceed [\$10,000] \$17,500, except for two buildings to be constructed or improved at a cost not to exceed [\$20,000] \$35,000 each, and the cost of altering any one building during the fiscal year shall not exceed [\$3,750] \$7,500 or [3] 6 per centum of the cost of the building, whichever is greater: * * *

Marketing services: For services relating to agricultural marketing and distribution, for carrying out regulatory acts connected therewith, [including the Packers and Stockyards Act, as amended September 2, 1958] and for administration and coordination of payments to States, * * * [of which \$15,000 shall be available for range and feedlot market reporting in Colorado and adjacent areas and] * * *

The first change would increase the present building construction limitation from \$10,000 to \$17,500. The current limitation is too restrictive and does not permit needed construction of marketing research laboratory space. Construction costs per square foot have steadily mounted in the past few years until it is not feasible at this time to attempt to plan and erect a building of the very limited size and facilities that would be possible under the \$10,000 limitation. The proposed \$17,500 limitation would allow more latitude in planning and negotiating for the building of marketing research laboratories not requiring special expensive construction features.

The second change proposes to increase the limitation for constructing two buildings each year from \$20,000 to \$35,000. The marketing research program is considerably handicapped by the limited laboratory space at most locations. Specialized laboratory space is urgently needed for such important research activities as meat grading studies, aging of animal tissues, enzymatic studies of seed germination, and studies of post-harvest diseases of deciduous fruits and vegetables. In such research, the laboratory space used must offer unusual or specialized facilities which greatly increase construction costs. For example, in certain planned research, radioactive tracer techniques are contemplated, requiring buildings constructed to meet safety standards of the Radiological Safety Committee of the Department. The present \$20,000 limitation will not permit erection of laboratory buildings incorporating these necessary features. Furthermore, while the limitation might be adequate for certain types of laboratory space, some degree of flexibility is necessary if the Government is to obtain the most favorable bids from contractors.

The third change would provide authorization to incur alteration costs for any one building during the fiscal year of \$7,500 or 6% of the cost of the building, whichever is greater. Costs of material and labor have risen substantially during the past several years. In addition, the market value of many buildings erected years ago is quite often three or four times their original cost, but the 3% limitation must be applied to the original cost. Retention of this and the \$3,750 limitation is thus not only hindering and delaying the alteration of buildings but also is making it impossible to accomplish certain essential changes to permit full utilization of buildings. The progress of the marketing research program is impeded and the most effective and efficient use of buildings is not possible under present limitations.

The fourth change proposes to delete language which was inserted in the 1960 Appropriation Act by the Senate for the apparent purpose of making clear that funds for administering the Packers and Stockyards Act were contained in this item. Since the legislative citations in the printed budget following this language include the Packers and Stockyards Act, the specific citation in the appropriation language is superfluous and should be deleted.

The fifth change proposes to delete language inserted in the 1960 Appropriation Act by the Senate to earmark funds to assure continuation of a market news activity which had been developed and initiated on a pilot basis with research funds. Since the Department expects to provide funds for this service on a continuing basis within the Marketing Services subappropriation, beginning in 1960, retention of the language proviso is unnecessary.



STATUS OF PROGRAM

The work under this appropriation consists of research and service to improve and develop the domestic marketing and distribution of agricultural commodities. The functions are divided into two subappropriations as follows:

1. Marketing Research and Agricultural Estimates.
2. Marketing Services.

Each subappropriation is further divided into financial projects. Current activities, progress, and trends are presented below on the basis of the financial projects.

MARKETING RESEARCH AND AGRICULTURAL ESTIMATES

1. Marketing Research

Current Activities and Trends:

Marketing research is directed toward the development of expanded markets for agricultural products; investigations of market organizations, costs and practices, including economic analysis of costs and margins; maintenance of product quality and reduction of losses from waste and spoilage; and reduction of marketing costs through improved marketing efficiency and organization.

The research is designed to solve problems at each stage of marketing such as in assembly plants, auction markets, terminal or central markets, and retail markets.

Much research is conducted in cooperation with the Land-Grant colleges and other public and private agencies, and under contract. The program is thus provided with the benefit of research resources and facilities which would otherwise not be available, permitting the application of a higher degree of specialization to specific marketing problems.

Research relating to standards and grades emphasized. Special emphasis and consideration are being given to research to strengthen grades, standards and grading methods. Coupled with this research, beginnings have been made on the evaluation of the relationship between grade standards for selected products and trade and consumer wants, preferences and expectations.

Cotton quality research strengthened. The Clemson laboratory is now the center of USDA cotton spinning research and fiber testing having to do with quality, and related economic studies concerned with the quality effects of various harvesting, drying, ginning and cleaning practices on the end-use value of cotton.

Consumer preference studies curtailed. The reduction in the 1960 appropriation for consumer preference research necessitated elimination of the two national studies planned for 1960 -- (a) teen-age children's preference for fibers in selected items of clothing, and (b) consumer attitudes toward selected fruits.

Research for new and expanded market outlets emphasized. Cooperation between the Agricultural Marketing Service and the Agricultural Research Service has resulted in a number of proposed research projects in the industrial and food use fields. Research by both Services is now underway on high amylose starch, a particularly promising potential industrial use for corn. Emphasis is also being placed on the role of new crops in replacing surplus crops and improving returns to producers.

Public demand for more wholesome foods. Public attitude is also having its effect on the marketing research program, principally in the stored products insects research program. The Department continues to emphasize insecticide residue studies and evaluation of chemicals which promise to leave less objectionable residue than those now in use. Studies have also been initiated on the development of nonchemical means of protecting stored commodities against insect damage.

Research program evaluated. The current year's research program, as in previous years, has been determined by a searching evaluation of the work underway and proposed. Through project reviews by Department research supervisors and administrators, with Advisory Committee guidance and suggestions, this evaluation aims at avoiding duplication and at closing out lines of work when results have been achieved or higher priority work needs to be substituted for less profitable lines of inquiry. In fiscal year 1959, 109 lines of work were completed or discontinued. During the same period, work was started on approximately 77 lines of work.

Selected examples of recent progress.

1. Impact of trading stamps on food prices reported. -- This project was completed during fiscal year 1959 with the issuance of a report on the highly controversial trading stamp issue. The findings indicated that the cost of stamps was covered in part by a reduced cost from increased volume, in part by higher food prices, and in part by the decline in profit per dollar of sales.
2. Cotton quality research laboratory at Clemson, South Carolina, began operations. - The pilot spinning plant of the Department's Cotton Quality Research Laboratory at Clemson, South Carolina, was put into operation during fiscal 1959. Initial tests were primarily concerned with mechanical performance of the equipment and with research method. Spinning performance research was begun on California cotton in September. This was followed by cotton from Mississippi.

As part of the research program on cotton fiber properties, a project was initiated on a new promising electrical resistance technique for measuring length and length distribution of cotton. The potentialities of the newly developed spinnable limit tests for spinning potential of cotton were demonstrated in connection with a cooperative study of commercial ginning practices. Damage to the spinning performance of the fiber caused by certain industry practices was clearly shown by the new test, whereas ordinary fiber tests failed to record this harmful effect. During the current fiscal year this pilot spinning plant began operating on two shifts to make available more rapidly the answers to the spinning quality problems confronting the industry.

3. Economic effects of the distribution of beef by Federal grades reported. - This study was made to provide the Congress, meat industry groups, and the public with information on the economic effects of Federal grades for beef on producers, consumers, and marketing firms. Among the significant findings of the report were that increased use of Federal grades for beef has contributed to greater efficiency in pricing beef by improving the bargaining position of both producers and consumers relative to marketing firms, and by cost reducing organizational changes in the beef industry.
4. Results of survey of homemakers' fiber preferences in household furnishings widely used. - Cotton was shown to be the leading household fiber for living room draperies, table coverings, bedspreads, bed linens and scatter rugs. For carpeting and blankets, wool was the highest ranking fiber. For soft floor coverings, durability was particularly mentioned by those owning wool; low cost was the major virtue of cotton. Results of this research are being widely used by industry, both as a background for cotton promotion campaigns and as a source of basic information on the make-up and scope of the market.
5. Data on domestic market for rice published for first time. - The domestic rice industry for the first time was provided with fundamental information on the characteristics of the domestic market for rice both on State-by-State and an aggregative basis. Data collected for two marketing years, 1955-56 and 1956-57, show the amount of variation occurring in domestic rice markets, with respect to location and size of markets, kind of buyers, kind of packaging, and type of rice distributed.

Rice for direct food use was distributed unevenly. States receiving the largest quantity of rice for direct food use in 1956-57 were New York, 15%; Louisiana, 13%; California, 10%; South Carolina, 8%; and Texas, 7%. Over 53% of the rice shipments for direct food use went to these five States. By contrast, 20 States accounted for less than 5% of the total.

Many favorable comments about the study have been received from industry.
6. New grapefruit product broadens market. - A study conducted in cooperation with the Florida Citrus Commission in one city indicates that consumers favorably accepted an artificially sweetened grapefruit juice offered at retail food stores in 46-ounce cans. A high proportion of users made repeat purchases and practically all indicated general satisfaction. The citrus industry is expected to use the results in a program to expand total grapefruit consumption.
7. Special Milk Program in summer camps evaluated. - A survey of 109 non-profit camps in three Northeastern States disclosed that the number of times milk was served each day, the milk purchasing practices followed by camp directors, the number and kind of competing beverages available and serving methods have an appreciable effect on the level of milk consumption. Each additional serving of milk -- up to 4-times daily -- brought about an increase in per capita consumption of 0.9 half-pint, assuming no change in service of other beverages.

8. Flight studies aid in control of fruit flies. - Contamination of dried fruit and fruit juices by the fruit fly (*Drosophila*) resulting from the use of infested fruit has become a major problem of the dried fruit industry. This infestation frequently occurs as a result of invasion of the processing plant by the fly. To locate sources of infestation, flight studies of the insect by use of radio-active tracers have proved useful.

Fruit and vegetable dumps were found to be important breeding locations. Chemical treatments were not as effective in eliminating infestations as covering the dumps with dirt. Tests showed that adult flies are unable to emerge from peaches covered with one inch or more of sandy loam soil. The dried fruit industry will benefit from this work in that the information obtained will aid in the marketing of a more wholesome product less liable to seizure resulting from contamination.

9. Improved treatment for the protection of bagged animal feed developed. - Tests conducted have shown that malathion applied monthly to the surface of stacked animal feed at the rate of 150 mg per sq. ft. is more effective in preventing and controlling insects than the pyrethrum treatments now being used. The new treatment is not only more effective but it is also considerably more economical. It will result in better than a 40% saving on insecticide cost when approved for use.
10. Improved method to control decay in cannery freestone peaches discovered. - A very important finding of this study was that peaches ripened after two-weeks storage at 32° F. develop only 10% as much decay as those ripened immediately after harvest. This procedure has already been adopted by some canners, who find that limited cold storage of the fruit before processing also results in better distribution of the workload at the plant. The Department's work was conducted in cooperation with the California Packing Corporation.
11. Peanut sampling and grading equipment developed. - The development and successful testing of an automatic sampler, a sheller, and a splitter for grading farmers' stock peanuts was an important accomplishment of the Department's quality evaluation research during the year. These machines have been recommended, or approved, for official use and will significantly lower the cost of official inspection and greatly improve its accuracy.
- Part of the widespread industry interest in these machines is due to the fact that this new grading and sampling equipment has potential for important uses in addition to that of official inspection. The spout sampler is already being used for sampling grain. The sheller is being used by seed certification personnel and breeders, and peanut processors intend using the splitter in plant quality control.
12. Rice mill operating cost analyzed. - A study of the cost of operating rice mills established industry average costs which can be used by the industry in analyzing the operating costs for each of their plants. Problem areas and potential efficiencies can be identified from these individual plant analyses. The study indicated that the volume of rice milled and the percentage packed in retail size containers explain most of the difference in per unit cost among the rice mills analyzed.

13. Improved methods developed for study of chemical changes in farm products. - New instrumentation and methods have been developed for spectrophotometric measurements of dense, light-scattering samples. This development makes it possible to study chemical changes in biological tissues without the need for elaborate chemical extraction procedures. On many materials, measurements can be made without disturbing the sample from its natural condition. For example, the respiratory enzymes of a seed can be studied as the seed goes through the germination process, or the variation in pigment concentration between samples of ripened apples can be evaluated. Many other applications like these make this development of particular importance to quality evaluation research and to market quality research in general.
14. Terminal market facilities improvement continues. - Major highlights of this work by which assistance is provided in planning the improvement of marketing facilities in production areas and in wholesale terminal markets:
 - a. Atlanta - A \$10 million fruit and vegetable market was opened in Atlanta, Georgia during fiscal year 1959. The Department assisted in the planning of this facility which will serve as a wholesale exchange point for Southern produce moving to Eastern and Midwestern markets.
 - b. Philadelphia - Following publication a year ago of the report "Wholesale Food Distribution Facilities for Philadelphia, Pa.", and formulation of related-organization plans in that city, construction of a new wholesale food center has progressed rapidly. In June 1959, the produce and seafood sections were dedicated replacing the old, unsanitary and inefficient markets in the old Dock Street area which have been in operation since Colonial times. These two new sections represent an investment of \$16 million.
 - c. New York - Estimates show possible yearly savings of nearly \$10 million if a modern and efficient market were built to replace the present outmoded and inefficient facilities in the lower Manhattan area. The savings would result mainly from reduced costs from spoilage and deterioration and for cartage, handling, traffic delays and rents.
15. Pilot box filler developed for handling apples. - Under a contract research project for designing and testing of pallet boxes used in handling and storing apples, a filler for automatically placing apples into pallet boxes was developed. Application has been made for a public use patent. This box filler assures the attainment by the industry of its long sought goal of sizing and sorting apples before storage. Based on a storage charge of 25 cents per bushel, a 15% cull-out, and a storage volume of 35 million bushels, the annual savings to the apple industry through presorting and presizing fruit should exceed \$1 million.

16. Improved livestock auction market layouts and work methods being widely adopted. - Marketing Research Report No. 309 "Livestock Auction Markets in the Appalachian Area -- Methods and Facilities" released in March 1959, and similar reports for the Southeast and Texas are being widely used, according to the Executive Secretary of the National Association of Livestock Auction Market Operators. Hundreds of auction operators have improved their work methods and facilities based on the principles set forth in these reports. In some instances, complete new markets have been constructed, based on the suggested designs.
17. Improving payment practices for fruit and vegetable growers studied. - This study indicates that a pool-pricing system (1) reflects consumer demand back to the growers, (2) protects growers as much as possible from short-run price fluctuations, and (3) enables the marketing agency to develop an orderly sales program. Cooperatives incorporated flexibility into the pool system by pooling on the basis of time, quality, variety and such other factors as necessary to reflect individual grower effort to meet the specification of consumer demands. The pool method of payment was closely associated with rigid marketing contracts. If these grower contracts become widespread, the intelligent use of pooling becomes increasingly important.

II. Economic and Statistical Analysis

Current Activities and Trends:

This project covers the gathering, analysis and interpretation of information on American agriculture as a whole, and for specific items including many statistical series relating to farm income, prices, population and labor, and agricultural situation reports for important crop and livestock products. The major objective of the work is to keep farmers and others concerned with agriculture fully informed on both the present and prospective agricultural situation through regular reports and special analyses for specified commodities and geographic areas.

After several years of experimental work, a livestock outlook service for the West was set up on a permanent basis beginning in July 1, 1959 at Denver, Colorado, as a cooperative project between the U. S. Department of Agriculture and the Extension Services of Western States.

Analyses were undertaken to strengthen the basis for the dairy outlook. Areas investigated included relationships of changes in value of milk cows to changes in cow numbers; trends in milk production per cow in individual States; and changes by regions and States in the level of butter production.

Increasing emphasis was placed on the study of the impact of alternative farm programs on agricultural prices and income.

The Chairman of the Senate Committee on Agriculture and Forestry, in a letter to the Secretary, has requested the cooperation of the technical staff of the Department in the development of materials and analyses needed for the preparation of an objective study of probable market supplies and prices for the major farm products for the period 1960-1965 under certain specific assumptions relating to production controls and price support levels.

Continuing work such as the periodic situation and outlook reports comprises a large part of this project. Through the Department's system of review of research, new work is begun when solutions are reached on a project or when it seems no answer can be found. In this way, new or expanded work is often financed by completing other projects or discontinuing lower priority projects.

Selected examples of recent progress:

1. Examples of current Situation and Outlook reports issued throughout the year. - Major developments affecting the farmers' economic situation included in the regular commodity situation reports issued during the year were:
 - a. Farm marketings and cash receipts: During the first three quarters of 1959, the annual rate of realized net farm income was \$11.2 billion compared with \$13.1 billion in the same period of 1958. Cash receipts were down about 2-1/2% with average prices received by farmers down close to 3%.
 - b. Feed-livestock: A large part of the change in the general agricultural situation occurred in this sector. Feed-grain production increased sharply in 1958 and again in 1959 to a new record level. At the same time, cyclical rebuilding of inventories of cattle, hogs and sheep continued throughout the twelve months ending July 1, 1959. The uptrend in livestock prices that accompanied earlier stages of expansion in numbers came to an end. Prices of hogs declined throughout the period under pressure of rising marketings. Prices of cattle continued to climb until early 1959, leveling out thereafter.
 - c. Broilers and eggs: Heavy supplies kept prices of broilers and eggs relatively low throughout the year.
 - d. Fats and oils: Total supplies of soybeans for 1959-60 are about the same as a year earlier as the larger carryover from the record 1958 crop was offset by smaller 1959 production. However, supplies of lard and cottonseed oil are much larger than a year ago.
2. Three comprehensive statistical bulletins published. - Egg and Poultry Statistics Through 1957 is the most comprehensive USDA publication devoted to poultry and related economic statistics issued since 1937. Livestock and Meat Statistics brings together the major statistical series relating to these products. Extra Long Staple Cotton Situation brought up-to-date the information relating to American-Egyptian cotton contained in previous statistical summaries.
3. Household food consumption analyses continued. - 1958 supplements to the USDA handbook on food consumption were prepared. Three cross-section indexes of per person food consumption from the 1955 household food survey data were developed. Two of these are in terms of food commodities, one covering food from all sources, and the other purchased supplies only. The third measures

per person consumption at retail. The indexes measure variations in consumption in households of the United States for four regions, grouped by urbanization and income, with subindexes for commodity groups. A coordinated set of value data was completed for food and food marketing services at the farm, retail, and final market levels (for all foods and domestic farm foods only).

Articles published in the National Food Situation emphasized the rather dramatic increases in the reliance on purchased farm foods as home production declined. Since the mid 1930's, the use of purchased foods has risen almost twice as much as that of farm foods from all sources. In the mid 1930's, home production supplied about 20% of civilian consumption of all farm foods, but in 1957 the proportion was down to about 8%.

In the Marketing and Transportation Situation the relation of increases in disposable money income to food expenditures was reported. The article pointed out that disposable money income per person rose about 38% from 1948 to 1957, and that real income per person climbed 18%. During the same period, the proportion of money income spent for food declined from about 25% to 22%.

4. First step completed in economic appraisal of marketing wastes and losses. - In response to the recommendations of the Food and Nutrition Advisory Committee over the past several years, work has been undertaken leading to an economic appraisal of marketing wastes and losses. The first step has been the development of an economic framework for the analysis. This is to be followed by detailed research on information for individual commodities and for stages in the marketing process.
5. Effects of inflation analyzed. - A study of the effect of price inflation on farm production expenses showed that the total production expenses have increased more than fourfold in the last 19 years, from \$6.2 billion in 1939 to \$25.2 billion in 1958. Only about a fourth of this increase resulted from an increase in purchased farm inputs such as fertilizer, pesticides, machinery, etc. Higher prices were responsible for the remaining three-fourths of the total increase.

Creeping inflation adds a billion dollars a year to farmers' costs of production and living. On the other hand, creeping inflation does not generate increases in the prices of farm products. In the present situation, when demand for farm products rises slowly -- much as the rate of population growth -- the heavy supply situation in agriculture, generally, and particularly the enormous accumulated surpluses of some crops effectively bar price rises by farm products. Thus, farmers are unable to hold their own in the cost-price squeeze.

Farmers who sell out and retire or go into some other business are the principal beneficiaries of higher values of farm real estate and other capital assets. Preliminary results indicate that approximately 30% of the increase in total assets of agriculture since January 1, 1940 resulted from investment by farmers in the various types of farm capital assets, in excess of depreciation or depletion. The remaining

70% represented price inflation. The increase in value of farm assets resulting from price increases averaged \$5.5 billion each year during the last 19 years. Since the annual average of farm operators' net income, including inventory change, was \$12.6 billion, capital gains in agriculture, realized or unrealized, have been approximately 45% as large as total net income.

6. Cash receipts, by commodities and States, for years 1924-1957 published. - These data published as USDA statistical Bulletin No. 246 provide a graphic analysis of the changing pattern of agricultural production in each State over the past 33 years. This Bulletin shows how farmers' efforts to meet changing needs in agriculture from year-to-year have resulted in marked long-run changes in the character of agricultural production and marketing in nearly all States. The publication was prepared in response to many requests from Congressional and other sources.
7. Long-range prospects of agriculture forecast. - The kind of consumption trends to be expected over the next 15 to 20 years and the changes in farm output required to accomodate those changes in consumption have been studied. With population expected to rise about 35% by 1975, and with some further growth in per capita food consumption, domestic use of farm products may increase as much as 50% in the next 15 to 20 years. Larger gains are expected for meat and poultry than for most crops, except perhaps for fruits and vegetables.
8. Significant farm population and employment changes and trends reported. -
 - a. The new definition of farm residence for 1960 census of population-matching in intent that of farms used in the census of agriculture -- will result in a considerable lowering of the official count of farm people. The old designation, which simply required a subjective answer to the question "Is this place a farm (or ranch)?" was unsatisfactory because of the increasingly mixed character of rural areas. It has been abandoned in favor of a definition derived from answers to two questions that determine farm residence on the basis of standards of acreage and value of farm products sold.
 - b. The impact of population change and migration on rural life in a Great Plains county was the subject of a research project initiated cooperatively with Colorado State University. This marks the first population research in the Great Plains undertaken by the Department in many years.
 - c. Estimates were published of the geographic distribution of farm population in April 1958 and of movement of people to and from farms in the preceding year. Outmovement from farms continues to be greatest in the South and the proportion of the farm population residing in the South is slowly declining.
 - d. Tabulations were completed on the Texas study of the effects of prolonged drought on farm population. The data indicate that farmers shifted to sheep and goats whenever possible in compensation for the failure of cash crops and forage crops. The decline in farm population from 1950-1958

amounted to about 35%, concentrated among people who had been operating small farms. The great majority of farmers approved of the Federal drought relief program carried on in the county surveyed.

e. Analysis of findings from the Michigan survey of intentions of high school seniors to migrate from low-income rural areas has been completed and is in review. The four-county area surveyed indicated 70% of the students planned to leave the area following graduation. Boys living on farms were the more likely to remain in the community after graduation. It is the nonfarm youth, especially the girls, who are either most eager or feel most obliged to leave. A third of the boys and a fifth of the girls planned to attend college.

III. Crop and Livestock Estimates

Current Activities and Trends:

Basic statistical and economic data relating to food and agriculture are gathered, analyzed, and published. These data include acreages, yields, production, stocks, value and utilization of farm crops; numbers, production, value and utilization of livestock and livestock products; refrigerated warehouse food stocks; and such related data as prices received and prices paid by farmers, and farm employment and wage rates. Thousands of farmers, processors, merchants and others serve as volunteer reporters, and their reports are supplemented by field observations of the Department's statisticians and other data to provide the many estimates and reports issued for public information.

Reports on cane-berries, bush-berries and other small fruit crops. - Consideration has been given to the features which would be desirable in a reporting service on cane-berries, bush-berries and other small fruits. A tentative plan has been developed for such a reporting program which would meet the needs of the industry. However, it is not possible to put this program into effect since all available resources are required to meet the heavy work load imposed by the established services. Strengthening the basic statistical program for all crop and livestock estimates must take priority over starting new services for additional commodities. Many requests have been received for initiating specific commodity reports, but these have had to be deferred in view of the importance of implementing the long-range program to improve the existing crop and livestock estimating services.

Long-range program to improve crop and livestock estimating. - The effort to improve the effectiveness of the Department's crop and livestock estimating program all along the line -- from research and data collection to the published estimates -- is active in the current year. Continuing study is being given to technical procedures, work forms, questionnaire designs, timing of reports, and other adjustments needed for greater efficiency and better public service. For example, the farm labor survey made in June 1959 in selected States incorporated important changes suggested by field work conducted previously in which answers to differently organized and worded farm labor questions were analyzed. Improved efficiency through processing data by electronic equipment is under constant study and this equipment is being used in an increasing area when feasible for the job. The following schedule shows the release dates for the reports issued in calendar year 1960.

RELEASE DATES 1960

CROP, LIVESTOCK AND LIVESTOCK PRODUCTS REPORTS

RELEASE DATES

RELEASE DATES 1960

DAY	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	DAY
1	Holiday	Con. Slaughter Prod. in 22 States			Sunday		Fruit, Non-Citrus Prod., Use & Value, Part 2	Boysen, County "State"					1
2	Saturday			Saturday						Saturday		Apples by varieties	2
3	Sunday	Canned Poultry	Canned Poultry	Sunday	Canned Poultry	Canned Poultry		Canned Poultry; Pigeons & Oriskany Cocker (Crown)	Canned Poultry; Rice Stocks	Sunday		Canned Poultry	3
4	Canned Poultry	Direct Slaughter & Feeder Inshipments - N. East Sta.		Canned Poultry; Turkey - Java Prod. Disp. & Income	Field & Seed Corn - Prod., Disp. & Value					Canned Poultry	Canned Poultry	Saturday	4
5			Saturday			Saturday	Holiday	Field Seed Stocks				Sunday	5
6	Field Seeds Supply & Disappearance		Sunday			Sunday	Canned Poultry	Free Milk Prod., Use & Value	Holiday		Saturday		6
7			Sunday	Smaller Chicks Placed Weekly - Aviculture							Sunday		7
8					Sunday	Cattle & Calves on Fed-Calif. & Ariz.	Cotton Production (Planted Acres)	Cotton Production		Saturday	Cotton Production	Cattle Production; Cattle & Calves on Fed-Calif. & Ariz.	8
9	Saturday	Cattle & Calves on Fed-Calif. & Ariz.	Cattle & Calves on Fed-Calif. & Ariz.		Cotton Prod. (prev. Cattle & Calves on Fed-Calif. & Ariz.)			Potato & Sweet Pot. Disp.; Cattle & Calves on Fed-Calif. & Ariz.	Crop Production; Farm Labor; Veg. - Fresh Market; Veg. - Processing	Sunday	Cattle & Calves on Fed-Calif. & Ariz.	Crop Production; Farm Labor; Veg. - Fresh Market; Veg. - Processing	9
10	Sunday	Crop Production; Farm Labor; Veg. - Fresh Market	Crop Production; Farm Labor; Veg. - Fresh Market		Crop Production; Farm Labor; Veg. - Fresh Market; Veg. - Processing	Crop Production; Farm Labor; Veg. - Fresh Market; Veg. - Processing		Crop Production; Farm Labor; Veg. - Fresh Market; Veg. - Processing			Crop Production; Farm Labor; Veg. - Fresh Market; Veg. - Processing	Saturday	10
11	Crop Production; Farm Labor; Veg. - Fresh Market; Veg. - Processing; Cabbage Stocks (NY)		Milk Prod.; Points Stocks; Early Lamb Crop	Crop Production; Farm Labor; Veg. - Fresh Market; Veg. - Processing		Saturday	Crop Production; Farm Labor; Veg. - Fresh Market; Veg. - Processor		Sunday	Cotton Production	Crop Production; Farm Labor; Veg. - Fresh Market; Veg. - Processing	Sunday	11
12	Milk Prod.; Sheep & Lamb on Feed		Saturday	Milk Prod.		Sunday	Milk Prod.		Milk Prod.	Milk Prod.	Saturday	Milk Prod.	12
13			Sunday			Milk Prod.	Hybrid Cows				Sunday		13
14	Hatchery Prod.		Chickens & Eggs - Layers & Males of Lay, lot of ex. Maritimes		Saturday		Orchardgrass & Tall Fescue (South Sta.) Seeds						14
15	Cold Storage; Pigs to Stock; Cattle & Calves on Feed	Cold Storage; Hatchery Prod.	Cold Storage	Milk Prod. Prod., Disp. & Income; Cattle & Calves on Feed; Hatchery Prod.		Cold Storage	Cold Storage; Cattle & Calves on Feed; Hatchery Prod.	Cold Storage	Cold Storage; Lard, White Clover & Alsike Clover Seeds	Saturday	Cold Storage; Lard & Mustard Seeds	Cold Storage; Hatchery Prod.	15
16	Saturday		Hatchery Prod. (incl. Rev. by month)		Saturday	Cold Storage; Annual Naval Stores; Hatchery Prod.	Lupine & Cresson Clover (South Sta.) Seed; Hatchery Prod.		Hatchery Prod.	Fluid Milk & Cream; Hatchery Prod.		Crop Prod. Annual Sun.; Annual Sun. - Veg. - Fresh & Processed; Crop Yellow-Wheat; Av. Price & Value	16
17	Sunday	Fluid Milk & Cream; Turkeys & Chickens Tested	Fluid Milk & Cream; Turkeys & Chickens Tested		Sunday	Fluid Milk & Cream; Turkeys & Chickens Tested	Fluid Milk & Cream; Turkeys & Chickens Tested; Naval Stores	Sunday	Fluid Milk & Cream; Turkeys & Chickens Tested	Fluid Milk & Cream; Turkeys & Chickens Tested; Cattle & Calves on Feed	Fluid Milk & Cream; Turkeys & Chickens Tested	Saturday	17
18	Fluid Milk & Cream; Naval Stores; Turkeys - Rubber Banded Intentional; Turkeys & Chickens Tested	Naval Stores	Prospective Plantings	Fluid Milk & Cream; Naval Stores; Turkeys & Chickens Tested; Veg. Seeds; Int. Acreage & Prospective Prod.		Naval Stores		Fluid Milk & Cream; Naval Stores; Hy. Bluegrass Seed; Turkeys & Chickens Tested		Sunday	Naval Stores	Naval Stores	18
19	Brands - Cream Seed; Vegetable Seeds - Acroge & Prod.	Milk Prod. on Hand & Statistics of Dairy Plant Products; Calif. Crop, 1959							Naval Stores; Pig Crop; Turkeys & Chickens Tested		Saturday	Naval Stores; Turkeys & Chickens Tested; Field Milk & Cream; Winter Wheat & Rye Seedlings; Annual Sun. of Beans; Incl. Rape Seed - Idaho	19
20		Saturday	Sunday					Saturday	Pop Stocks		Sunday		20
21	Wap. & Condensed Milk Held by Wholesale Grocers		Pop Stocks	Wap. & Condensed Milk Held by Wholesale Grocers	Saturday	Pig Crop; Sour Cherry Report; Mohair Prices; Wool Prices	Wap. & Condensed Milk Held by Wholesale Grocers	Sunday		Wap. & Condensed Milk Held by Wholesale Grocers; Turkey Breeder Re-Intentional			21
22	Rice Stocks	Holiday		Veg. Processing; Rice Stocks	Sunday		Veg. - Processing; Calif. Crop; Cabbage - Number Banded		Veg. Seed Stocks		Saturday	Pig Crop	22
23	Saturday			Saturday				Saturday	Crocheries - Ind. Prod.	Peasut Stocks & Process.	Sunday	Peasut Stocks & Process.	23
24	Sunday	Peasut Stocks & Process.	Peasut Stocks & Process.		Sunday	Veg. - Processing; Peasut Stocks & Process.; Ace Products; Liquid, Proso, Solids		Sunday	Peasut Stocks & Process.		Holiday	Saturday	24
25	Stocks of Grains; Peasut Stocks & Process.; Ace Products; Liquid, Proso, Solids	Chickens & Eggs - Layers & Age Prod. monthly rev.; Ace Products; Liquid, Proso, Solids	Ace Products; Liquid, Proso, Solids	Stocks of Grains; Peasut Stocks & Process.; Ace Products; Liquid, Proso, Solids		Ace Products; Liquid, Proso, Solids	Saturday	Stocks of Grains; Peasut Stocks & Process.; Ace Products; Liquid, Proso, Solids	Boatgrass, Redtop, Timothy, & Bermuda Grass Seeds; Ace Products; Liquid, Proso, Solids	Sunday			25
26	Wool Prod. & Value of Sales; Mutton Prod. & Value of Sales		Saturday	Chickens & Eggs Prod. Disp. & Income (incl. Con. Slaughter)		Sunday	Lamb Crop		Ace Products; Liquid, Proso, Solids		Saturday	Holiday	26
27		Saturday	Sunday		Apr'l Prices		Shore Wool Prod.; Meat Meat & Thawing	Saturday					27
28	Honey Annual Summary; Meat Meat & Thawing			Meat Animals - Farm Prod., Disp. & Income; Con. Livestock Slaughter & Meat Prod. May. by month	Saturday			Sunday		Apr'l Prices; Rice Stocks			28
29	Apr'l Prices; Con. Livestock Slaughter & Meat Prod.; Wap., Condensed & Dry Milk	Apr'l Prices; Con. Livestock Slaughter & Meat Prod.; Wap., Condensed & Dry Milk		Apr'l Prices; Con. Livestock Slaughter & Meat Prod.; Total Livestock Slaughter - Meat & Lard Prod.; Wap., Condensed & Dry Milk	Sunday		Apr'l Prices; Con. Livestock Slaughter & Meat Prod.; Wap., Condensed & Dry Milk	Turkeys - Banded	Red Clover Seed		Saturday	Certified Seed Potatoes	29
30	Saturday		Saturday		Holiday	Apr'l Prices; Wap., Condensed & Dry Milk; Con. Livestock Slaughter & Meat Prod.	Saturday	Apr'l Prices; Wap., Condensed & Dry Milk; Con. Livestock Slaughter & Meat Prod.		Sunday			30
31	Sunday		Apr'l Prices; Wap., Condensed & Dry Milk; Con. Livestock Slaughter & Meat Prod.	Wap., Condensed & Dry Milk; Con. Livestock Slaughter & Meat Prod.		Sunday	Apr'l Prices; Wap., Condensed & Dry Milk; Con. Livestock Slaughter & Meat Prod.			Wap., Condensed & Dry Milk; Con. Livestock Slaughter & Meat Prod.	Saturday		31

Part 1 -- Apples, sweet & sour cherries, figs, grapes, nectarines, peaches, pears, persimmons, plums, pomgranates & prunes. Part 2 -- Apples, avocados, cranberries, dates, olives.

-- LOCK-UP REPORTS

Crop and livestock reporting service in Alaska.- Two exploratory visits to Alaska by Department personnel have given a clear picture of the problems involved. Information gained on these trips has furnished the basis for the development of a plan for a cooperative office with the Division of Agriculture, under the Alaska Department of Natural Resources, and working arrangements with the Alaska Experiment Station. It is planned to assign an agricultural statistician to Alaska in early 1960 at the time the Agricultural Census is taken. This statistician will work closely with the Bureau of the Census and local Alaskan authorities in making the census coverage as complete as possible. A good enumeration will help materially in establishing accurate basic benchmarks for later reporting. The cooperative office can be established as soon as funds, which are requested in the 1961 Budget Estimate, are provided.

Selected examples of recent progress:

1. Cotton estimating program improved. -Streamlining and improving the cotton estimating program, which was greatly facilitated by the enactment of P.L. 85-430, approved May 29, 1958, moved forward at an accelerated rate during the year. The shift to a planted acreage estimate in the July report and acreage for harvest as of August 1, as provided in the new act, has been helpful. Overlapping surveys have been eliminated and questionnaires, summary forms, and estimating procedures redesigned and simplified to key in with the new program. Adjustment in the operational workload has made possible strengthening of analytical procedures, and improvement in the serviceability of the estimates. P.L. 85-430 was the first major change in statutes affecting cotton forecasts in 35 years.
2. Tangelo estimates inaugurated. - Forecasts and estimates of the Florida tangelo crop were started with the October 1958 report. Production of this cross of the tangerine and grapefruit has increased rapidly in Florida in recent years. The value of the 1957-58 crop was nearly \$1.5 million.
3. Initial report on utilization of potatoes issued. - In October 1958, a report was issued covering the utilization of the 1956 and 1957 crops of potatoes. This report, the first of its kind issued by the Department, is a part of the expanded statistical program on potatoes which was started in 1956. The report covers the volume of potatoes in hundredweight sold for table stock, used for chips and shoestrings, for dehydration, frozen French fries, other frozen products, canned potatoes and other canned products, starch and flour, sold for livestock feed, and sold for seed. The report also includes nonsales items, such as seed used on farms where grown, used in farm household, used for feed, shrinkage and loss on farms where grown.
4. Cattle-on-feed reports expanded. - Eight States were added to the quarterly cattle-on-feed report in 1959, and an additional 5 States will be added in 1960, bringing the total in the program to 26. In addition, beginning in 1960, monthly reports will be issued for California and Arizona, and January 1 report for 11 additional Southeastern States. These reports include State estimates of the number of animals being fed for market, classified by weight, kinds of cattle,

and length of time on feed. Also included are estimates of the number of head placed on feed, the number marketed during the preceding quarter, and the number expected to be marketed during the coming quarter.

5. Large herds now included in estimating milk cow numbers. - Basic materials were assembled to permit analysis of data for large herds, (more than 50 cows) in deriving indications of June 1, 1959 milk cow numbers in all States, except for Florida and California. Previously, 1-50 cow-herd data only had been considered in securing indications of change by States. However, the growing importance of the large herds made it imperative to consider them in measuring changes in milk cow populations.
6. Biennial survey of warehouse capacity. - A report on the 19th Biennial Survey of refrigerated warehouse capacity was released during the year. The Department has been collecting data on the growth, change, and location of national cold storage space since 1921. Availability of this information, on a county and State basis, has proved invaluable in defense planning programs concerned with the transportation and warehousing of food products.
7. Estimates of farm employment by States published. - Statistical Bulletin No. 236 released in September 1958 provides revised 1950-57 U.S. and regional farm employment estimates, and also provides the first continuous series of farm employment estimates by States ever published. Current estimates of farm employment by States (including some combinations of minor States) are now included in the monthly issues of Farm Labor, appearing for the first time in the September 1958 issue.
8. Pilot program established for improving estimates of prices received and paid by farmers. - In recognition of the increased need for improved price statistics, a pilot price enumeration program was established in Ohio that had as its primary objectives:
 - a. To establish a pilot program for collecting data on prices received by farmers and prices paid by farmers from a probability sample by means of personal enumeration;
 - b. To compare the data so secured with those collected from the regular mail surveys; and
 - c. To provide the basic information needed for designing an operating program for collecting price data of known or specified reliability.

The first phase of this program was a survey of a sample of farms in Ohio to determine the channels through which farmers market their products and buy their samples.

The pricing phase was begun in November 1958 and monthly price enumerations covering selected groups of items both for prices received and prices paid by farmers have been made since that time. It is proposed to continue the monthly price enumerations through early 1960 adding new commodities and new commodity groups to the pricing program and deleting others from time to time. In this way comparisons could be obtained between mail enumeration returns on as many commodities as possible. At the same time, an adequate number of enumerations for each could be obtained to determine the validity of or the biases inherent in mailed inquiries, and the number of returns required to provide reasonably reliable State estimates of price averages. A comprehensive analysis of the results of the first year's work is in process. Similarly, a complete analysis and summary of the project will be made after the close of the operations.

9. Development of new and improved sampling techniques for crop and livestock estimating continues. - Objective yield surveys were continued in fiscal 1959 generally along the lines followed in fiscal 1958, covering the same crops and with samples of about the same size. Among the new projects were: an experimental survey of fruit tree numbers by age and variety with area sampling technique, and a project to develop objective forecasting procedure on sour cherries, both conducted in Michigan. Objective methods for estimating Burley tobacco yields in Kentucky, developed as a research project, have now become part of the regular estimating program and, accordingly, research in this area has been discontinued.

The scope of the objective yield research surveys is shown in the following table.

Objective Yield Research Surveys, F.Y. 1959

<u>Crop</u>	<u>No. of States</u>	<u>No. of Fields</u>	<u>Period of field work</u>
Cotton	13	860	1958 growing season
Corn	23	1,200	1958 growing season
Soybeans	11	175	1958 growing season
Wheat	9	236	1959 growing season
Burley Tobacco	1 (Kentucky)	100	1958 growing season

MARKETING SERVICES

The activities under this subappropriation contribute to efficient and orderly marketing of products of American agriculture and aid farmers in obtaining maximum return for their production. These activities are divided into five functional categories. Examples of accomplishment, by project, during 1959 are as follows:

I. Market News Service

Current Activities:

This service assists farmers in obtaining equitable returns for their products and aids in orderly marketing and prevention of waste, resulting from local surpluses, by providing timely and reliable market news on all major agricultural commodities. This is accomplished through the collection of market information at year-round and seasonal offices maintained in more than 100 cities and towns and the dissemination of this information by mail, press, radio, television, telephone, telegraph, bulletin board, and trade and farm publications. More than 1200 daily newspapers having an average circulation of 37 million--approximately 70% of the 53 million circulation of all daily newspapers--carry news based on Federal market reports. A total of about 1,470 radio stations broadcast news regularly, and approximately 165 television stations carry market news reports.

Selected Examples of Recent Progress and Trends:

1. Activity, by Commodity Group, Fiscal Year 1959

Commodity Group	: Field:	: Buyers and Sellers:	: Daily News-papers:	: Stations Broadcasting Reports:	: Mimeo-graphed Releases to Growers, Shippers, and Others:	: On Mail-ing List
Cotton and cottonseed:	:	:	:	:	:	:
Year-round.....	36	:	:	:	:	:
Seasonal.....	6	:	:	:	:	:
Total.....	42	4,124	330	278	26	1,412,000
Dairy and poultry products.....	37	3,100	920	1,004	100	8,850,000
Fruit and vegetables:	:	:	:	:	:	:
Year-round.....	33	:	:	:	:	:
Seasonal.....	37	:	:	:	:	:
Total.....	70	6,050	500	594	56	9,503,000
Grain, and related products:	:	:	:	:	:	:
Year-round.....	25	:	:	:	:	:
Seasonal.....	2	:	:	:	:	:
Total.....	27	1,852	840	693	67	2,705,400
Livestock, meats and wool.....	46	6,600	1,070	1,346	141	2,250,000
Naval stores.....	1	16	75	24	0	80,145
Tobacco:	:	:	:	:	:	:
Year-round.....	3	auction	:	:	:	:
Seasonal.....	7	system	:	:	:	:
Total.....	10	:	50	122	8	932,800

2. New and improved services.

Continuous effort is made to re-evaluate, improve, shift emphasis, and modernize as necessary to meet needs for this service. Several recent improvements have been made through either (1) Savings realized from management improvements; (2) increased Federal appropriations; or (3) increased State contributions.

These improvements are as follows:

F. Y. 1959

- a. A livestock reporting service with headquarters at Clovis, N.M., was initiated on auction, range and feedlot sales in New Mexico and parts of West Texas and Oklahoma.
- b. Meat reporting was initiated at Omaha and Denver. Collection of meat import information was begun on both the East and West Coasts.
- c. Weekly egg movement reporting was initiated at Atlanta, Ga., Birmingham, Ala., Boston, Mass., Harrisonburg, Va., and Jackson, Miss., and the report of weekly movement of shell eggs into retail channels in the Chicago area was expanded to represent more closely the trend for the area.
- d. Citrus fruit f.o.b. reporting was initiated at Los Angeles in response to requests of the industry whose need arose from the increase in direct buying of citrus and smaller volume of sales by auction companies.
- e. Increased use of television was made for improved tobacco market reporting. Through the extensive use of graphs, charts and other visual aids the tobacco marketing situation was effectively presented during the Maryland marketing season at Upper Marlboro, the flue-cured season at Raleigh, N. C. and the Burley season at Lexington, Ky.
- f. Grain, hay and feed reports were improved in several respects; (1) feed-stuff price quotations were changed from a "bagged" basis per ton to a "bulk" basis per ton. This was done to conform with changing trade practices. (2) The report at Birmingham, Ala was expanded to cover daily cash grain prices in producing areas during the principal marketing season. (3) The State of California financed expansion of the grain and hay reports from El Centro to cover additional markets.
- g. Comprehensive traffic-load studies of the leased wire system resulted in a rearrangement of two circuits serving the southwest area thus greatly improving transmission of market data to the livestock and fruit and vegetable industries in that area. In addition, by eliminating the relay activities at Chicago it was possible to (1) speed up transmission and provide wider coverage at 9 markets; and (2) relieve the overloaded Eastern circuit.

- h. On January 27, 1959, an industry-wide meeting was held in Dallas, Texas, relative to the spot cotton quotations in the 14 designated spot markets. The importance of the accuracy of these quotations and means for improving the composition and work of the quotations committees were thoroughly discussed. As a result the Department is to undertake a broad study of central market quotations to (1) determine, as objectively as possible, the accuracy and adequacy of central market quotations in reflecting current prices for Middling 1-inch cotton and differentials for other qualities; (2) determine the basis for the price quotations practices followed by quotations committees in arriving at quotations, and other factors which might be associated with variations in the accuracy of the quotations; and (3) explore feasible means of strengthening and improving quotations.

F. Y. 1960

- a. Two Federal-State seasonal services are being initiated in 1960 - - one on spring vegetables and melons at Blythe, Calif., and one on potatoes at Klanath Falls, Ore. The former is in cooperation with the State of California and the latter with both California and Oregon.
- b. A livestock reporting service, conducted during 1958 and 1959 as a pilot program, was placed on a service basis in 1960 as a Category I service, financed from currently available funds. The reporter, stationed at Denver, Colo., covers range and feedlot sales of cattle, sheep and calves in Eastern Colorado, Western Kansas and the sand hills of Nebraska.

3. Federal-State Cooperation

Federal-State Cooperative Agreements in Effect, Fiscal Year 1959

by Commodity Group

Dairy and Poultry Products	Fruits and Vegetables	Grain and Feed Products	Livestock, Meats, and Wool	Tobacco
Alabama	Alabama	Alabama	Alabama	--
--	Arizona	--	--	--
Arkansas	Arkansas	Arkansas	Arkansas	--
California	California	California	California	--
--	Colorado	--	--	--
Connecticut	Connecticut	Connecticut	Connecticut	--
Delaware	Delaware	Delaware	Delaware	--
Florida	Florida	Florida	Florida	--
Georgia	Georgia	--	Georgia	--
--	Hawaii	--	--	--
--	Idaho	--	--	--
Illinois	Illinois	Illinois	Illinois	--
Indiana	--	--	Indiana	--
Iowa	Iowa	Iowa	Iowa	--
Kentucky	Kentucky	Kentucky	Kentucky	Kentucky
Louisiana	Louisiana	Louisiana	Louisiana	--
--	Maine	--	--	--
Maryland	Maryland	Maryland	Maryland	Maryland
Michigan	Michigan	--	--	--
--	Minnesota	--	Minnesota	--
Mississippi	Mississippi	Mississippi	--	--
Nebraska	--	--	--	--
New Hampshire	--	--	--	--
--	New Jersey	--	--	--
New York	New York	--	--	--
N. Carolina	N. Carolina	N. Carolina	N. Carolina	N. Carolina
--	N. Dakota	--	--	--
Ohio	--	--	Ohio	--
--	--	--	Oklahoma	--
Oregon	Oregon	Oregon	Oregon	--
Pennsylvania	Pennsylvania	Pennsylvania	Pennsylvania	--
--	Rhode Island	--	--	--
S. Carolina	S. Carolina	S. Carolina	S. Carolina	--
Tennessee	Tennessee	Tennessee	Tennessee	Tennessee
Texas	--	Texas	Texas	--
Utah	Utah	Utah	Utah	--
Virginia	Virginia	Virginia	Virginia	Virginia
Washington	Washington	Washington	Washington	--
West Virginia	West Virginia	West Virginia	West Virginia	W. Virginia
Wisconsin	--	--	--	--
Total	30	33	26	6

4. Cooperative financing.

Financing of the market news reporting service is based on 3 categories:

<u>Category</u>	<u>Significance of Marketing Data</u>	<u>To be Financed by</u>
I	National	Federal appropriation.
II	Regional	Joint Federal-State funds ranging from maximum of 75% to a minimum of 25% of either Federal or State funds.
III	Local	State or local funds.

5. Federal cost of service.

	1959	1960(Est.)	1961(Est.)
Total cost of service.....	\$5,043,000	\$5,195,392	\$5,226,722
Less reimbursements*.....	198,469	196,392	197,622
Paid from appropriation...	4,844,531	4,999,000	5,029,100

*Includes amounts reimbursed to the appropriation in accordance with cooperative agreements. Does not include amounts expended directly by States and by local groups both under cooperative agreement and outside of agreement.

II Inspection, Grading, Classing and Standardization

Current Activities:

These activities assist farmers in obtaining returns for their products commensurate with quality. This is accomplished by (1) establishing United States standards for agricultural commodities that will accurately describe their quality and condition; (2) developing the equipment and methods by which these standards may most efficiently be applied; (3) broadening the knowledge, acceptance and use of such standards by producers, dealers, manufacturers, consumers and others through demonstrations, training courses, color charts, photographs, plaster models, preparation and loan or sale of copies of standards, etc.; (4) providing an impartial inspection, grading and classing service for producers, dealers and others on the basis of these standards; and (5) administration and enforcement of regulatory and criminal provisions of the Poultry Products Inspection Act and of statutes that require the use of official United States standards for cotton, cotton linters, and grain sold in interstate commerce and for tobacco sold at designated auction markets.

Selected Examples of Recent Progress and Trends.

1. Standardization and related activities. United States standards provide a common language to describe quality of products being bought and sold. They must be revised and kept up to date to reflect results of new research and significant changes occurring in production, merchandising practices, and uses of the products. Visual aids are an important part of this work to assure as much uniformity as possible in the application of the standards.

The volume of standardization and demonstration activities in 1959, by commodity group, is reflected in Table I.

a. Adequacy of Universal Cotton Standards Studied

A special study was made of the adequacy of the present Universal Standards for the grade of American upland cotton as directed by the Committee on Appropriations of the House of Representatives.

The results of this study and recent surveys of the upland cotton crop were presented to the twelfth Universal Cotton Standards Conference held in Washington, May 25-27, 1959. This was a regular triennial conference held under the Universal Cotton Standards Agreement between the United States Department of Agriculture and 14 cotton associations in Belgium, England, France, Germany, India, Italy, Japan, The Netherlands, Poland, and Spain. The Agreement provides for (1) adoption, use, and observance of Universal Standards for United States upland cotton, (2) the arbitration and settlement of disputes regarding classification of this cotton, and (3) the preparation, distribution, inspection, and protection of practical forms (boxes of samples) of the Universal Standards. In addition to the signatory associations to the Agreement, representatives of all segments of the

cotton industry in the United States participate in the classification and standardization activities conducted under the Agreement.

The conference this year was attended by representatives from each foreign signatory association and from 46 industry groups in this country, including cotton producers, shippers, exchanges, mills, and ginneries. These representatives approved about 1,900 boxes of the Universal Standards now in effect.

The representatives also carefully evaluated all data and information the Department presented with regard to need for revisions in the present Universal Standards and reached the following decisions:

(1) Official physical standards for Spotted cotton in the grades Strict Middling Spotted through Low Middling Spotted be promulgated to replace the present descriptive standards for these grades. Good Middling Spotted will remain a descriptive standard.

(2) Official descriptive standards for Light Spotted cotton in the grades Good Middling Light Spotted through Low Middling Light Spotted be promulgated.

(3) Official descriptive standards for Plus cotton in the White grades, Middling Plus through Good Ordinary Plus, be promulgated.

(4) Official descriptive standards for Light Gray cotton in the grades Good Middling Light Gray through Strict Low Middling Light Gray be promulgated.

(5) The wording of the present official descriptive standards for Gray cotton be revised slightly for purposes of clarity.

(6) An official definition for Below Grade cotton be promulgated.

(7) No general revision of the standards be made at this time.

(8) A proposed system for specifying color and leaf separately by use of plus and minus numbers not be adopted. The present rule for averaging factors of grade will remain in effect.

(9) The proposed standard for Strict Good Ordinary Spotted cotton not be promulgated.

All of the changes in standards described above have been promulgated to be effective August 1, 1960.

TABLE I

Volume of Standardization and Demonstration Activities, by Commodity Group, Fiscal Year 1959

Type of Activity	Cotton and Cotton- seed	Dairy Prod- ucts	Fruits and Vege- tables	Grain, Hay, Feed, Seed, etc.	Livestock Meats and Wool	Poultry Prod- ucts	Tobacco and Naval Stores
Standardization Activities:							
Grade standards in effect June 30, 1959.....	110	8	286	18	21	46	896
Number of commodities covered.....	3	7	216	18	22	8	3 a/
New standards issued in fiscal year 1959.....	-	-	3	-	-	-	-
Standards revised in fiscal year 1959.....	-	1	13	4	1	-	291
New standards in process June 30, 1959.....	15	3	13	-	1	2	-
Standards being revised as of June 30, 1959:	9	1	20	4	1	2	110
Requests pending for new standards.....	-	4	18	-	-	2	-
Requests pending for revision of standards..	-	3	22	2	1	-	92
Demonstration Activities:							
Farm demonstration.....Number.....	10	-	-	-	1	-	705
Attendance.....	30	-	-	-	425	-	9,457
Farmer meetings.....Number.....	89	13	-	26	5	-	386
Attendance.....	11,583	650	-	1,500	350	-	5,474
Farm visits.....Number.....	1,875	-	-	-	-	-	114
Attendance.....	4,853	-	-	-	-	-	286
School demonstrations.....Number.....	305	25	28	25	5	2	2,002
Attendance.....	6,603	671	1,400	1,500	411	250	49,224
Short courses at Agricultural Colleges.....Number.....	5	3	-	-	1	-	27
Attendance.....	147	555	-	-	100	-	602
Other demonstrations.....Number.....	2,630b/	-	-	-	40	19	27
Attendance.....	6,940c/	-	-	-	4,200	150,000	c/
Grading and training schools.....Number.....	-	-	95	-	-	-	25
Attendance.....	-	-	1,408	-	-	-	440
Packing houses, processing plants visited...	-	-	267	-	-	-	-
Industry members interviewed.....	-	-	411	-	-	-	-
Other meetings.....Number.....	703	31	872	-	-	-	-
Attendance.....	8,033	3,367	50,050	-	-	-	-
Fairs, field days and classing contests.....Number.....	21	-	-	-	-	-	59
Attendance.....	910,666	-	-	-	-	-	d/
Distributed--							
Copies of standards.....	23,660	9,438	135,500	15,000	17,100	15,000	4,444
Farmer bulletins, leaflets, etc.....	5,865	450	-	3,200	20,100	251,254	145,050
Visual Aids:							
Prepared-							
Plaster and wax models.....	-	-	986	-	-	-	-
Color photographs.....	-	-	-	-	-	-	-
Other.....	-	-	14	-	-	-	-
Distributed or displayed							
Plaster and wax models.....	-	-	1,175	-	-	-	-
Color photographs, charts and guides.....	2	-	480	2,500	11,000	21,278	-
Black and white photographs.....	-	-	1,688	-	-	15	-
Slides and film strips.....	5	-	7,337	-	-	-	-
Type samples and physical forms.....	3,899	-	105	1,500	-	-	-
Exhibits and other displays.....	233	-	-	-	-	2	-
Television films.....	8	-	-	-	-	-	-
Cotton sample sets for schools.....	231	-	-	-	-	-	-

AGRI-WASH

a/ Includes turpentine, rosin and 24 types of tobacco.

b/ Includes radio and television appearances.

c/ Excludes radio and television attendance.

d/ Not available.

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b. International standards for dairy products

A representative of the Department served as a member of the Committee on Ordinances and Regulations for the International Association of Milk and Food Sanitarians. The major assignment this year pertained to the development of comprehensive basic guidelines for the uniform labeling of milk and milk products. When in final form, it is intended that the International Association will recommend the "code" for adoption by various countries on a regional basis.

The Department took an active part in the work started last year on the preparation of definitions and standards for major dairy products proposed for use in international trade. These, together with other material, were presented by the United States delegation at the Meeting of Government Experts on Milk Standards sponsored by the Food and Agriculture Organization, held in September 1958 and April 1959, at Rome, Italy.

c. Cooperative wool standardization studies

A series of field demonstrations to show the application of objective standards for the important grade determining factors of wool was continued. These demonstrations, using standard coring and sampling procedures, consisted of sampling and testing grease wool for fineness, staple length, coring, clean fiber content, color, crimp, and other characteristics. They were held for warehousemen, growers, buyers, and manufacturers.

This program started in early 1958 in cooperation with the National Wool Marketing Corporation and their affiliated State organizations. It is designed to assist in bringing about a more unified warehouse preparation of wool and the development of a standard type description for marketing. Demonstrations were held in twelve locations and a total of 3,182,000 pounds of wool was tested. The use of a subcoring box was introduced which reduces the size of the sample necessary and still insures a good representative sample of the lot. Also demonstrated for the first time was the use of a 3/8's inch coring tube for use in drawing samples from bales of wool. Some hook sampling of original growers' lots continues but results of this method do not appear very favorable.

A cooperative project with the U. S. Tariff Commission, involving a study of foreign and domestic carpet type wools, was inaugurated. The phases of this project undertaken by the Department have included assisting in the sampling, and analyzing the samples for average fiber diameter, fiber diameter distribution, and content of heterotypical fibers. This project is expected to be completed during 1960.

2. Inspection, grading and classing activities

- a. More than 16.5 million bales of cotton were classed by Federal employees in 1959. Of this total, 10.7 million were for the 511,880 farmer-members of cotton improvement groups organized under the Smith-Doxey Act. This classing for farmers represented 93% of the total U.S. ginnings as compared with 87% in 1958.
- b. The volume of dairy products inspected was about 19% below that of the previous year. This was due principally to the reduction in volume of Cheddar cheese inspected and graded in connection with purchases under the price support program. Butter, dry milk and miscellaneous dairy products were inspected and graded in about the same quantity as the previous year.
- c. A new high was reached in the volume of inspections of fresh fruits and vegetables in 1959. Over the past several years the industry trend has been toward increasingly large buying and distributing organizations. Production has followed the same pattern, causing a steady increase in the volume of fruits and vegetables inspected.
- d. Inspection of processed fruits and vegetables also showed a substantial increase over the previous year. The major part of the increase was in canned and frozen products.
- e. Statistical principles are being incorporated in the inspection program to attain better and more reliable product control during packing operations, to improve inspection procedures and to estimate lot compliance with greater reliability. Examples of such accomplishments are as follows:
 - (1) Fill Weight of Canned Freestone Peaches-- A detailed procedure in which the fill of container for Canned Freestone Peaches can be determined and controlled at time of packing. This procedure permits the packer to maintain close controls over fill weights and to make adjustments periodically during packing operations to correct over-fill or under-fill. Also, because of the large sample size, compliance of lot can be estimated with a greater degree of accuracy than a conventional drained weight procedure which results in destructive sampling and is more time consuming.
 - (2) Analyses of Citrus Products-- During the past season a comprehensive program was initiated in Florida to determine the various constituents in citrus juices and concentrates. Under this program all of the important mineral components, sugars and ascorbic acid were determined on representative samples from each packer. Using the data collected, the inspection service can objectively determine the presence of adulteration by added water or sugar.

f. Heavy activity continues under Grain Standards Act.

Total grain production, quantity inspected, and number of inspections by licensees showed substantial increases in 1959. Although the total number of inspections reviewed by Federal supervisors remained about the same, the number of appeal inspections decreased about 19%. Soybean carlots, particularly those destined for export, continue to be handled on appeal at many points, and during the course of loading aboard ship. Appeals on flaxseed at Minneapolis and Duluth continue fairly heavy. Appeals at ports create problems of man power shortages which are alleviated by the temporary detail of personnel from other points.

g. Inspection to be available for U. S. grain loaded at Canadian ports.

A 17-State area tributary to the Great Lakes-St. Lawrence waterway accounts for over 75% of the total annual production in the United States of wheat, corn, barley, oats, rye, sorghum grains, soybeans, and flaxseed. Much of the grain moving to deficit areas in the U.S. and to foreign markets originates in this 17-State area.

The opening of the St. Lawrence Seaway has seen a phenomenal increase in the export of grain through the ports of Chicago, Duluth, Saginaw and Toledo. Approximately 50 million bushels were shipped from those markets in the short period from the opening of navigation in early May through the end of June. (This compares with 30 million bushels during the whole of 1958.)

In a circular issued in April 1959, the Board of Grain Commissioners for Canada provided for inspection of Canadian grain by Board employees. It stipulated further that shippers and exporters would have to arrange for inspection by U. S. grain inspectors of U. S. grain loaded into ocean vessels at Canadian ports. In order to assure that the quality of the U. S. grain loaded at Canadian ports meets the grades specified, the Department in July 1959 announced that upon request such an inspection service would be provided on a fee basis.

h. Protein Testing of Cargo Wheat.

On January 5, 1959, the Department announced formal procedures for the inspection of cargo wheat for protein content. The service, authorized under regulations issued pursuant to the Agricultural Marketing Act of 1946, was inaugurated to supplement the inspection and grading of grain for quality under the U.S. Grain Standards Act and is being performed at the request of interested parties on a fee basis. Interest in this service among the various segments of the grain industry is increasing.

i. Egg grading program increased.

The volume of eggs graded was over 20% greater than in 1958 -- from 29 to 35 million cases of 30 dozen each. This increase is attributed to the increased demand for consumer labeled products at the retail level.

To make possible greater assurance of wholesomeness in eggs, arrangements were made for the laboratory testing of frozen eggs when such product was not prepared in plants under continuous supervision. This procedure involves chemical analysis, providing a means of detecting the presence in the product of eggs which may have been unfit for food.

j. Poultry Products Inspection Act fully effective January 1, 1959.

Inspection under the Poultry Products Inspection Act was inaugurated May 1, 1958, and became fully effective on January 1, 1959. On that date, it became mandatory that all slaughtered poultry and poultry products shipped interstate and in foreign commerce be Federally inspected for wholesomeness, or be specifically exempted. The Poultry Inspection Service was considerably expanded during the calendar year 1958 to meet the new responsibilities imposed by the Act.

The large and rapid expansion in inspection services on January 1, 1959, entailed heavy recruitment and training of new inspection personnel in inspection procedures and techniques. This expansion was accomplished with a minimum of disruption to the industry.

Beginning January 1, 1959, canning and packaging plants engaged in further processing poultry products were exempted from the continuous inspection requirement. This exemption was made in order to concentrate available resources on providing full inspection at slaughter and evisceration plants. The Department is recommending legislation to amend the Poultry Products Inspection Act in order to continue this exemption beyond June 30, 1960. Under this arrangement continuous inspection service is provided from appropriated funds in the evisceration and slaughter plants only. Canning and packaging plants are required to use inspected poultry and to meet all sanitary requirements. These plants may, however, obtain continuous inspection service on a fee basis under the voluntary program.

As of June 30, 1959, continuous inspection service was being provided in 480 slaughter and evisceration plants and 33 such plants were temporarily exempted pending staffing. In addition, 271 canning and packaging plants were operating under the applicable provisions in the regulations. Although exempt from continuous inspection requirement, 185 of these plants had requested and were receiving this service on a fee basis under the voluntary program.

As of the first of December, 549 evisceration and slaughter plants were receiving inspection service. In addition, 80 evisceration and slaughter plants had indicated they would require inspection service before the end of the 1960 fiscal year. In each case, dates have been established as to when these plants expect to be ready to request inspection service. An additional 8 plants have indicated that they will be ready for inspection service in fiscal year 1961. This would bring the total plants receiving continuous inspection service to 637 by June 30, 1961.

k. Lamb Grading Suspension Studied

At the request of wool growers associations and other groups of sheep producers in early Spring 1959, consideration was given to the suspension of Federal grading of lamb and mutton. The suspension request was made and supported by some feeder and packer groups on the basis that Federal grading is a detriment to merchandising lamb. The Federal Register of May 28, 1959 carried the notice of proposed discontinuance of Federal lamb grading effective August 1, 1959. Comments were invited and additional factual information on both sides of the issue was requested. The overwhelming majority of replies from producers, packers, wholesalers and retailers urged continuance of this fee service as an aid to efficient and orderly marketing of lamb. Hence, on July 23, 1959 the decision to continue lamb grading was announced with a request to the livestock and meat industry for proposals for improving the grade standards for lamb and mutton carcasses.

A series of meetings was held with industry representatives and in mid-October a proposed set of revised standards was submitted to the industry modifying existing standards in line with suggestions received. Comments received clearly indicated a lack of agreement within the lamb industry. On December 2, 1959, therefore, the Secretary announced the suspension of lamb grading for one year beginning January 4, 1960, during which time further attempts were to be made to reach agreement on this service. On December 30, 1959, at the request of the chairman of the House Agriculture Committee, the Department announced postponement of the suspension for one month. This action was taken to permit the Committee to become more fully acquainted with the problem.

l. Commodities inspected and graded.

Table II shows the volume of commodities inspected and graded in 1959 and that estimated for 1960 and 1961 under authority of the Agricultural Marketing Act and other legislation which provides for charging of a fee to cover the cost of the service.

Tables III, IV, V, and VI show volume of inspection, grading, and classing activities in main commodity fields performed pursuant to legislation other than the Agricultural Marketing Act of 1946.

Table II-Commodities Inspected and Graded on a Fee Basis,
Fiscal Years 1959 - 1961

Commodity Group	Unit	1959	1960(Est.)	1961(Est.)
<u>Fresh fruits and vegetables</u>	: car or			
At receiving markets.....	: carlot	93,180	96,000	98,000
At shipping points.....	: equiva-	1,346,815	1,345,000	1,360,000
Total carlots.....	: lent	1,439,995	1,441,000	1,458,000
<u>Processed fruits and veg.</u>	:			
Canned products.....	: case.....	173,900,000	170,000,000	170,000,000
Frozen, dried, and misc.	: pound....	2,988,300,000	3,300,000,000	3,400,000,000
<u>Dairy products:</u>	:			
Butter, cheese, dry skim	:			
milk, evaporated milk,	:			
miscell. products.....	: pound....	2,786,062,585	2,845,000,000	2,845,000,000
<u>Poultry products graded:</u>	:			
Shell eggs.....	: case.....	34,872,000	38,000,000	40,000,000
Processed eggs.....	: pound....	503,563,000	530,000,000	551,000,000
Poultry, including rabbits:	: pound....	2,022,195,000	2,291,100,000	2,411,100,000
<u>Poultry products inspected a/</u>	:			
Poultry, including rabbits:	: pound....	995,361,000	10,375,000	10,375,000
Poultry certified for	:			
canning.....	: pound....	178,587,000	190,000,000	200,000,000
<u>Grain and related products:</u>	:			
Rice, beans and peas.....	: 100# bag.	50,256,357	58,500,000	58,500,000
Hay.....	: ton.....	22,506	50,000	50,000
Hops.....	: bale.....	259,167	260,000	260,000
Seed verification and	:			
reverification.....	: pound....	62,379,000	72,000,000	72,000,000
<u>Miscellaneous commodities:</u>	: certifi-			
	: cates			
	: issued..	28,000	30,000	30,000
<u>Meat and meat products:</u>	:			
Beef.....	: pound....	6,537,858,000	6,700,000,000	7,125,000,000
Veal and calf.....	: pound....	167,771,000	180,000,000	207,000,000
Lamb and mutton.....	: pound....	252,798,000	260,000,000	265,000,000
Miscellaneous.....	: pound....	141,988,000	200,000,000	200,000,000
Total, meat and meat	:			
products.....	: pound....	7,100,415,000	7,340,000,000	7,797,000,000
<u>Cotton.....</u>	: classifi-			
	: cation..	7,638	8,000	8,000
<u>Cottonseed.....</u>	: certifi-			
	: cates			
	: issued..	71,965	85,000	85,000
<u>Cotton fiber.....</u>	: test made:	17,212	17,000	17,000
<u>Naval Stores:</u>	:			
Rosin.....	: drum			
	: equiva-			
	: lent....	278,522	298,950	317,550
Turpentine.....	: gallon			
	: equiva-			
	: lent....	5,296,744	6,000,000	6,335,000

a/ See Table III for volume of inspection under "Poultry Products Inspection Act."

Table III-Activity under the Poultry Products
Inspection Act
1959 - 1961

Item	Fiscal Year		
	1959	1960 (Est.)	1961 (Est.)
	Number	Number	Number
Poultry Inspected:			
Head.....	929,640,000	2,113,045,000	2,252,499,000
Pounds - live weight.....	3,298,271,000	7,496,874,000	7,991,643,000
Poultry Condemned:			
Ante-mortem:			
Head.....	2,231,000	5,070,000	5,533,000
Pounds - live weight.....	7,919,000	18,440,000	19,641,000
Post-mortem:			
Head.....	14,004,000	32,088,000	34,179,000
Pounds - N. Y. dressed.....	42,852,000	98,195,000	104,594,000
Poultry certified (ready-to-cook).....	2,434,507,000	5,519,627,000	5,883,984,000
Evisceration and Slaughter:			
Plants indicated as subject to the Act	625	637	637
Plants under continuous inspection as:			
of 6/30.....	480	629	637
Lines within plants under inspection :			
as of 6/30.....	1,140	1,340	1,340
Plants exempted as of 6/30.....	33	--	--
Other Processing:			
Plants indicated as subject to the			
Act.....	360	360	360
Plants under continuous inspection as:			
of 6/30.....	--	--	--
Plants exempted as of 6/30.....	263	360	360
Examination of labels:			
Proposed labels received.....	25,000	15,000	15,000
Labels approved.....	15,000	5,000	5,000
Labels disapproved.....	10,000	10,000	10,000
Laboratory work:			
Chemical compounds received for			
review.....	1,470	1,750	1,900
Approved.....	1,189	1,400	1,550
Rejected.....	144	170	185
Chemical tests made.....	921	1,100	1,200
Gross pathological specimens examined:	234	280	300
Histopathology specimens examined....	1,290	1,550	1,700
Color pathology slides developed for :			
training purposes.....	930	1,100	1,200

Table IV-Cotton and Cotton Linters Classifications

Fiscal Years 1959 - 1961

Type of Service and Legislative Authority	Number of Classifications Made		
	1959	1960(Est.)	1961(Est.)
<u>Cotton Classifications by:</u>			
<u>Federal Employees</u>			
Statistics and Estimates Act.....	316,167	242,000	242,000
Smith-Doxey Amendment.....	10,691,369	15,108,500	15,108,500
Cotton Standards Act:			
Public Classing Service.....	4,083,053	1,700,000	1,700,000
International Cooperation			
Administration (reimb.).....	6,931	5,000	5,000
Federal Penitentiary (reimb.).....	52,851	71,500	71,500
C. C. C. Inventory.....	998,830	100,000	100,000
C. C. C. Loan (reimb.).....	31,716	45,000	45,000
Other.....	36,597	20,000	20,000
Cotton Futures Act.....	295,167	200,000	200,000
Subtotal (Federal Employees).....	16,512,681	17,492,000	17,492,000
<u>Licensed Classers (under Federal supervision)</u>			
Cotton Standards Act (Includes bale classifications and samples classed in sorting cotton into lots by grade and staple).....	4,942	7,000	7,000
Total, Cotton Classifications.....	16,517,623	17,499,000	17,499,000
Cotton fiber tests made.....	141,594	145,000	145,000
Micronaire determinations for futures cotton.....	109,095	100,000	100,000
<u>Cotton Linters Classifications by:</u>			
<u>Federal Employees</u>			
Cotton Standards Act.....	3,052	5,000	6,000
Other (cooperating mills and grade survey).....	13,318	--	--
Subtotal (by Federal employees).....	16,370	5,000	6,000
<u>Licensed Classers</u>	1,835	2,500	--
Total, Cotton Linters Classifications.....	18,205	7,500	6,000

Table V
Volume of Grain Inspection (by Licensed Inspectors Federally Supervised) and
Appeal Activities (by Federal Inspectors) under the U.S. Grain
Standards Act 1/

Activity	Fiscal Year			
	1941	1959	1960(Est.)	1961(Est.)
<u>Inspection Services:</u>				
Quantity of grain produced:				
crop year (1,000 bu.)....	5,456,682	8,415,961	8,500,000	8,500,000
Quantity of grain in-				
spected (1,000 bu.).....	1,944,430	6,419,624	6,600,000	6,700,000
Number of inspection				
points.....	178	377	390	400
Number of licensed in-				
spectors.....	414	666	675	700
Total number of in-				
spections.....	1,268,121	3,511,548	3,600,000	3,700,000
Inspections supervised				
by Federal supervisors				
(excludes appeals).....	134,621	139,577	147,000	190,000
Percent of inspections				
supervised (includes				
appeals).....	15.1	5.6	6.0	7.0
<u>Appeal Services:</u>				
Number of district offices:	37	35	35	35
Number of sub-offices.....	6	13	13	13
Number of appeals referred:	not avail-			
: able		60,713	70,000	70,000
Number of appeals denied				
or cancelled.....	none	500	1,000	1,000
Number of appeals decided:	45,894	60,213	69,000	69,000
Original grade sustained				
(percent).....	67.5	70.0	75.0	80.0
Original grade changed				
(percent).....	32.5	30.0	25.0	20.0
Number of appeals carried				
to appeal boards.....	638	936	900	850
Supervisor's grade				
sustained (percent)...	79.0	80.8	85.0	85.0
Supervisor's grade				
changed (percent)....	21.0	19.2	15.0	15.0
Total number of certifi-				
cates issued.....	1,325,667	3,572,697	3,669,900	3,769,850
Overtime and related costs:	none	\$77,800	\$70,000	\$70,000

1/ Users of this service pay a fee to the licensed inspector. No Federal fee is charged except in the case of appeal inspections when licensees' grades are not changed.

Table VI-Tobacco

Number of Auction Markets and Volume of Tobacco Inspected under the Tobacco Inspection Act

Item	Fiscal Year		
	1959	1960(Est.)	1961(Est.)
Number of markets.....	177	177	177
Number of designated markets.....	177	177	177
Number of markets inspected.....	177	177	177
Number of sets of buyers.....	240	240	240
Volume inspected at auction markets (million lbs.).....	1,765	1,850	1,850
Percent of total volume sold at auction....	100	100	100

Volume of Tobacco Inspected, by Class - Fiscal Year 1959

Class of Tobacco	Number of Auction Markets	Sets of	Quantity Sold	Quantity Inspected	% Inspected
	Designated	Inspected	Buyers	Thousand Pounds	
<u>Auction Markets:</u>					
Flue-cured.....	94	94	147	1,185,960	100
Fire-cured.....	8	8	12	41,869	100
Dark air-cured.....	10	10	5	18,406	100
Burley.....	61	61	71	486,312	100
Maryland.....	4	4	5	36,001	100
Total.....	177	177	240	1,768,548	100
<u>Cooperative Marketing Associations</u>	Auction types.....			161,831	
	Non-auction types.....			11,557	
Grand total.....				1,941,936	

m. Estimated percentage of crop marketed under Federal grades is as follows:

Commodity or Commodity Group	Fiscal Year	
	1959	1960(Est.)
Cotton.....	94	95
Cotton linters.....	5	5
Cottonseed.....	65	73
Dairy products		
Butter.....	44	44
Cheese.....	5	5
Dry milk.....	55	55
Fresh fruits and vegetables.....	85	85
Canned fruits and vegetables.....	60	60
Frozen fruits and vegetables.....	90	90
Grain products		
Beans.....	41	45
Grain.....	100 a/	100 a/
Hay.....	0.1	0.2
Hops.....	98	98
Peas.....	45	45
Rice.....	65	65
Seed verification and reverification.....	41	45
Meat		
Beef.....	51	51
Veal and calf.....	17	18
Lamb, yearling and mutton.....	37	37
Poultry inspected (compulsory)		
Broilers.....	48	90
Turkeys.....	15	95
Fowls.....	36	90
Poultry inspected (voluntary)		
Turkeys.....	42	-
Poultry (other than turkeys and rabbits).....	11	-
Poultry and eggs graded		
Shell eggs.....	20	22
Liquid eggs.....	72	86
Dried eggs.....	67	75
Poultry (excluding turkeys).....	26	30
Turkeys.....	66	66
Tobacco (sold at auction markets).....	100	100
Rosin.....	100	100
Turpentine.....	100	100

a/ In interstate and foreign commerce.

n. Fees and Charges Revised.

Fees and charges for services rendered are revised when necessary to cover the cost of the service. Table VII shows the revisions for fiscal years 1959 and 1960 to date.

The inspection work relating to cotton and cottonseed, grain and tobacco and the standardization activities for all commodity groups, are financed largely from the appropriation. Since May 1, 1958 mandatory poultry inspection pursuant to the Poultry Products Inspection Act has been financed from the appropriation. For other commodities, including voluntary poultry inspection, fees are collected to pay a large part of the expenses of the inspection and grading work. However, appropriated funds are used to offset, in part, the cost of the employer retirement contribution for that part of the service financed from fees.

The Agricultural Appropriation Act of 1952 authorized advances each year from the Commodity Credit Corporation, as needed, in addition to other funds available, to assure ability to perform the classing of cotton and the grading of tobacco without charge to producers. The Corporation is reimbursed through subsequent appropriations to the extent necessary for costs of classing and grading commodities not placed under commodity loan.

Certain items of revenue other than the earnings used to defray expenses are deposited to "Miscellaneous Receipts of the Treasury." The net cost of this project to the taxpayer in 1959 (Table VIII) was about \$11.3 million, or 32% of the total cost of the program. In 1960, (Table IX) the cost to the taxpayer is estimated at about \$15.8 million, or 39% of the total cost. The increase reflects, primarily, the growth of the mandatory poultry inspection program under the Poultry Products Inspection Act.

III. Freight Rate Services

Current Activities:

This activity assists in obtaining and maintaining equitable transportation rates and services on farm products and farm supplies through the Department's participation in cases before the Interstate Commerce Commission and other regulatory bodies and informal negotiations with carriers and groups of carriers.

TABLE VII

Revisions in Fees and Charges, Fiscal Years 1959 and 1960

Purpose of Fee	Effect of Change	New Rate	Effective Date
1. Cotton and cottonseed			
a. Cottonseed grade certificate..	Increase of 20% from \$0.25.....	\$0.30	July 1, 1958
b. Cotton fiber and spinning test.....	Minor adjustments with no significant increase or decrease in revenue.....	Involves 12 fees	December 1, 1959
c. License fees			
Cotton linters classers....	Initial license issuance increased 500% from \$10.....	\$50.00	July 19, 1958
	Renewal increased 100% from \$5.....	\$10.00	
Cottonseed samplers.....	Initial license issuance increased 50% from \$5.....	\$7.50	July 1, 1958
	Renewal increased 67% from \$3.....	\$5.00	
Cottonseed chemists.....	Initial issuance increased 100% from \$50	\$100.00	July 1, 1958
d. Practical forms of cotton standards.....	Upland, American Egyptian and Sea Island Grade Standards		
	Domestic shipments F.O.B. Washington from \$10.....	\$12.00	July 1, 1958
	Foreign shipments delivered from \$12.	\$14.00	"
	6 sample upland guide boxes and tentative standards for preparation		
	Domestic shipments F.O.B. Washington from \$5.....	\$7.00	"
	Foreign shipments delivered from \$6.50	\$8.50	"
	Staple standards.		
	Domestic shipments F.O.B. Washington from \$2.....	\$2.50	"
	Foreign shipments delivered from \$2.50.....	\$3.00	"
2. Dairy products			
a. Grading of butter and cheese and sampling of dry and evaporated milk.....	Approximately 10% increase.....	Involves 21 fees	July 1, 1959
b. Hourly rate used when unit or weight fee are inadequate.....	Increase from \$3.60 to \$5 per hour.....	Involves 3 fees	July 1, 1959
3. Fruits and vegetables			
a. Inspection of fresh fruits and vegetables.....	Increase of 20% on commercial inspections and 12.5% on supplies to public and private agencies.....	Involves 6 fees	July 1, 1958
b. Inspection of processed fruits and vegetables.....	Continuous inspection - 5% increase in overhead charge for permanent inspectors.....	25% of inspector's salary per month	July 1, 1959
	Increase of 11.1% in hourly rate.....	\$5 per hour	July 1, 1958
	Commercial fee for lot inspection: Increase of 11.1% in basic fee from \$9 to \$10.....	Involves 14 fees	"
	Increase on dried fruits of 43%.....	\$1.00	"
	Increase of 25% on unofficial samples....	Involves 2 fees	"
	Increase of 33% on honey in bulk.....	\$1 per sample	"
	Increase of 25% on figs and dates.....	\$2.50	"
	Average of 5% to 6% increase in analyses.	Involves 42 fees	"
4. Grain products			
a. Inspection of grain products and miscellaneous commodities for compliance with quality specifications and for condition.....	Increased fee approximately 12.5% and provided overtime charge of \$5.50 per hour.....	Involves 126 fees	July 1, 1958
	Increased fee from 1 to 1-1/2 cents per bag on beans, peas and rice.....	Involves 15 fees	"
	Increased fee on carlots of hay by approximately 10%.....	Involves 4 fees	"
b. Appeal inspections under the U.S. Grain Standards Act....	Increased appeal fees approximately 40% and increased overtime charge from \$5.50 to \$5.80 per hour.....	Involves 6 fees	September 29, 1958
5. Poultry products			
a. Compulsory poultry inspection:	Increase of 10% in overtime and holiday rates.....	Involves 2 fees	July 1, 1958
b. Voluntary poultry inspection:	Increase of approximately 10% to offset pay cost increases.....	Involves 8 fees	"
c. Voluntary poultry grading....	Rates adjusted to yield about 7-1/2% in collections to offset pay cost increases.....	Involves 9 fees	"

Table VIII

UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service

Actual Cost of Inspection, Grading, Classing, and Standardization Activity
And Cost of Program to Taxpayer, by Work Project

Fiscal Year 1959

Work Project	Total	Paid from Revenue Earned			Paid From		Income	Net Cost to Taxpayer	Percent	Percent
		Reimb.	Trust	Total	Advances	Appro- priation	to		of Total	of Total
		to			from		General		Cost	Cost
		Appro- priation 1/			CCC		Revenue		Charged	Covered
			Funds		2/		Fund of Treasury		to	by
									Taxpayer	Revenue
<u>Inspection, Grading, and Classing</u>										
Cotton and cottonseed.....	\$3,897,020	\$1,787,467	\$21,871	\$1,809,338	\$33,502	\$2,054,180	\$2,693,149	-\$605,467	-	115.5
Dairy products.....	1,768,366	-	1,729,263	1,729,263	-	39,103	-	39,103	2.2	97.8
Fruits and vegetables.....	6,148,180	-	5,667,552	5,667,552	-	480,628	-	480,628	7.8	92.2
Grain (U.S. Grain Standards Act).....	1,951,906	79,368	-	79,368	-	1,872,538	594,110	1,278,428	65.5	34.5
Livestock, meats and wool..	4,475,040	-	4,265,326	4,265,326	-	209,714	-	209,714	4.7	95.3
Naval stores.....	33,213	-	14,430	14,430	-	18,783	1,550	17,233	51.9	48.1
Poultry products grading....	3,365,532	-	3,146,278	3,146,278	-	219,254	-	219,254	6.5	93.5
Poultry products inspection:	7,971,703	1,058,800	880,329	1,939,129	-	6,032,574	-	6,032,574	75.7	24.3
Rice, hay, beans, etc.....	1,373,618	-	1,346,713	1,346,713	-	26,905	-	26,905	2.0	98.0
Tobacco.....	3,005,299	550,070	-	550,070	575,424	1,879,835	1,783	2,453,446	81.6	18.4
TOTAL.....	33,989,877	3,475,705	17,071,762	20,547,467	608,926	12,833,484	3,290,592	10,151,818	29.9	70.1
<u>Standardization</u>										
Cotton and cottonseed.....	422,444	-	-	-	-	422,444	47,917	374,527	88.7	11.3
Dairy products.....	32,834	-	-	-	-	32,834	-	32,834	100.0	-
Fruits and vegetables.....	283,970	5,066	-	5,066	-	278,904	-	278,904	98.2	1.8
Grain (U.S. Grain Standards Act).....	141,488	7,735	-	7,735	-	133,753	-	133,753	94.5	5.5
Livestock, meats and wool..	149,960	-	-	-	-	149,960	-	149,960	100.0	-
Naval stores.....	12,410	-	-	-	-	12,410	348	12,062	97.2	2.8
Poultry products grading....	59,412	688	-	688	-	58,724	-	58,724	98.8	1.2
Poultry products inspection:	25,395	-	-	-	-	25,395	-	25,395	100.0	-
Rice, hay, beans, etc.....	47,018	-	-	-	-	47,018	-	47,018	100.0	-
Tobacco.....	61,630	-	-	-	-	61,630	-	61,630	100.0	-
TOTAL.....	1,236,561	13,489	-	13,489	-	1,223,072	48,265	1,174,807	95.0	5.0
<u>Total Inspection, Grading, Classing and Standardization</u>										
Cotton and cottonseed.....	4,319,464	1,787,467	21,871	1,809,338	33,502	2,476,624	2,741,066	-230,940	-	105.3
Dairy products.....	1,801,200	-	1,729,263	1,729,263	-	71,937	-	71,937	4.0	96.0
Fruits and vegetables.....	6,432,150	5,066	5,667,552	5,672,618	-	759,532	-	759,532	11.8	88.2
Grain (U.S. Grain Standards Act).....	2,093,394	87,103	-	87,103	-	2,006,291	594,110	1,412,181	67.5	32.5
Livestock, meats and wool..	4,625,000	-	4,265,326	4,265,326	-	359,674	-	359,674	7.8	92.2
Naval stores.....	45,623	-	14,430	14,430	-	31,193	1,898	29,295	64.2	35.8
Poultry products grading....	3,424,944	688	3,146,278	3,146,966	-	277,978	-	277,978	8.1	91.9
Poultry products inspection:	7,997,098	1,058,800	880,329	1,939,129	-	6,057,969	-	6,057,969	75.8	24.2
Rice, hay, beans, etc.....	1,420,636	-	1,346,713	1,346,713	-	73,923	-	73,923	5.2	94.8
Tobacco.....	3,066,229	550,070	-	550,070	575,424	1,941,435	1,783	2,515,076	82.0	18.0
TOTAL.....	35,226,438	3,489,194	17,071,762	20,560,956	608,926	14,056,556	3,338,857	11,326,625	32.2	67.8

AERI-WASH

1/ Includes amounts reimbursed by CCC for classing cotton and grading tobacco placed under loan.

2/ Reflects costs incurred under funds advanced by CCC for classing cotton and grading tobacco not placed under loan.

Table VIII

UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing ServiceActual Cost of Inspection, Grading, Classing, and Standardization Activity
And Cost of Program to Taxpayer, by Work Project

Fiscal Year 1959

Work Project	Paid from Revenue Earned				Paid From		Income		Percent	
	Reimb.						to		of Total	
	to				Advances		General		Cost	
	Appro-	Trust	Total		from	Appro-	Revenue	Net Cost	to	of Total
	priation	Funds			CCC	priation	Fund of	to	Charged	Cost
	1/				2/		Treasury	Taxpayer	to	by
									Taxpayer	Revenue
<u>Inspection, Grading, and Classing</u>										
Cotton and cottonseed.....	\$3,897,020	\$1,787,467	\$21,871	\$1,809,338	\$33,502	\$2,054,180	\$2,693,149	-\$605,467	-	115.5
Dairy products.....	1,768,366	-	1,729,263	1,729,263	-	39,103	-	39,103	2.2	97.8
Fruits and vegetables.....	6,148,180	-	5,667,552	5,667,552	-	480,628	-	480,628	7.8	92.2
Grain (U.S. Grain Standards: Act).....	1,951,906	79,368	-	79,368	-	1,872,538	594,110	1,278,428	65.5	34.5
Livestock, meats and wool..	4,475,040	-	4,265,326	4,265,326	-	209,714	-	209,714	4.7	95.3
Naval stores.....	33,213	-	14,430	14,430	-	18,783	1,550	17,233	51.9	48.1
Poultry products grading...	3,365,532	-	3,146,278	3,146,278	-	219,254	-	219,254	6.5	93.5
Poultry products inspection:	7,971,703	1,058,800	880,329	1,939,129	-	6,032,574	-	6,032,574	75.7	24.3
Rice, hay, beans, etc.....	1,373,618	-	1,346,713	1,346,713	-	26,905	-	26,905	2.0	98.0
Tobacco.....	3,005,299	550,070	-	550,070	575,424	1,879,805	1,783	2,453,446	81.6	18.4
TOTAL.....	33,989,877	3,475,705	17,071,762	20,547,467	608,926	12,833,484	3,290,592	10,151,818	29.9	70.1
<u>Standardization</u>										
Cotton and cottonseed.....	422,444	-	-	-	-	422,444	47,917	374,527	88.7	11.3
Dairy products.....	32,834	-	-	-	-	32,834	-	32,834	100.0	-
Fruits and vegetables.....	283,970	5,066	-	5,066	-	278,904	-	278,904	98.2	1.8
Grain (U.S. Grain Standards: Act).....	141,488	7,735	-	7,735	-	133,753	-	133,753	94.5	5.5
Livestock, meats and wool..	149,960	-	-	-	-	149,960	-	149,960	100.0	-
Naval stores.....	12,410	-	-	-	-	12,410	348	12,062	97.2	2.8
Poultry products grading...	59,412	688	-	688	-	58,724	-	58,724	98.8	1.2
Poultry products inspection:	25,395	-	-	-	-	25,395	-	25,395	100.0	-
Rice, hay, beans, etc.....	47,018	-	-	-	-	47,018	-	47,018	100.0	-
Tobacco.....	61,630	-	-	-	-	61,630	-	61,630	100.0	-
TOTAL.....	1,236,561	13,489	-	13,489	-	1,223,072	48,265	1,174,807	95.0	5.0
<u>Total Inspection, Grading, Classing and Standardization</u>										
Cotton and cottonseed.....	4,319,464	1,787,467	21,871	1,809,338	33,502	2,476,624	2,741,066	-230,940	-	105.3
Dairy products.....	1,801,200	-	1,729,263	1,729,263	-	71,937	-	71,937	4.0	96.0
Fruits and vegetables.....	6,432,150	5,066	5,667,552	5,672,618	-	759,532	-	759,532	11.8	88.2
Grain (U.S. Grain Standards: Act).....	2,093,394	87,103	-	87,103	-	2,006,291	594,110	1,412,181	67.5	32.5
Livestock, meats and wool..	4,625,000	-	4,265,326	4,265,326	-	359,674	-	359,674	7.8	92.2
Naval stores.....	45,623	-	14,430	14,430	-	31,193	1,898	29,295	64.2	35.8
Poultry products grading...	3,424,944	688	3,146,278	3,146,966	-	277,978	-	277,978	8.1	91.9
Poultry products inspection:	7,997,098	1,058,800	880,329	1,939,129	-	6,057,969	-	6,057,969	75.8	24.2
Rice, hay, beans, etc.....	1,420,636	-	1,346,713	1,346,713	-	73,923	-	73,923	5.2	94.8
Tobacco.....	3,066,929	550,070	-	550,070	575,424	1,941,435	1,783	2,515,076	82.0	18.0
TOTAL.....	35,226,438	3,489,194	17,071,762	20,560,956	608,926	14,056,556	3,338,857	11,326,625	32.2	67.8

AGRI-WASH

1/ Includes amounts reimbursed by CCC for classing cotton and grading tobacco placed under loan.

2/ Reflects costs incurred under funds advanced by CCC for classing cotton and grading tobacco not placed under loan.

Selected Examples of Recent Progress and Trends:

1. Actions Taken During 1959.

During the year the Department participated in 139 actions before the Interstate Commerce Commission, Federal Maritime Board, Civil Aeronautics Board, United States Courts, and carrier bureaus and committees. This was an increase of 25 over 1958 and actions covered nearly all agricultural commodities and most of the important farm production supplies. Of this total 57, or 77%, were completed favorably to the Department; 17 unfavorably; and as of June 30, 1959, 65 were still pending. The agricultural community in each of the 48 States was affected to some degree by these actions. The various agricultural commodities or rates affected by the above actions and estimates for 1960 and 1961 are shown in the following table:

Type of Action and Commodities or :	F i s c a l Y e a r		
Rates Affected :	1959	: 1960(Est.)	: 1961(Est.)
<u>Formal Litigation</u> :	Number	: Number	: Number
Interstate Commerce Commission:	72	: 72	: 72
Federal Maritime Board.....:	3	: 3	: 3
State Utilities Commission....:	2	: 2	: 2
U. S. Courts.....:	2	: 2	: 2
<u>Informal negotiations</u>:	60	: 60	: 60
Total.....:	139	: 139	: 139
<u>Commodities or Rates Affected:</u>			
Cotton and cottonseed.....:	6	: 6	: 6
Dairy and poultry products.....:	14	: 14	: 14
Fruits and vegetables.....:	18	: 18	: 18
Grain and grain products.....:	32	: 32	: 32
Livestock and meats.....:	9	: 9	: 9
Wool and mohair.....:	2	: 2	: 2
Agricultural implements.....:	2	: 2	: 2
Sugar.....:	3	: 3	: 3
Fertilizer and fertilizer	:	:	:
material.....:	4	: 4	: 4
Motor carrier rates - General....:	27	: 27	: 27
Rail rates - General.....:	16	: 16	: 16
Water rates - General.....:	6	: 6	: 6
Total.....:	139	: 139	: 139

2. Rate Adjustments Requested on Commodity-by-Commodity Basis

Transportation litigation and negotiation this past year were unique in several respects. The trend in cases now is such as to require not only a transportation rate specialist, but in addition, a transportation economist and a transportation cost analyst in nearly every case, formal or informal.

The railroads made no request for a single rate increase affecting all commodities moving in all parts of the country. They, as well as motor carriers and water carriers, limited their efforts to adjusting rates on individual commodities or small groups of commodities in one or a rather limited number of geographical territories. This unusual development was due in part to a statement made to the railroads by the Interstate Commerce Commission in 1957 that adjustments requested by them subsequent to that date ought to be sought on a commodity-by-commodity or service-by-service basis rather than by a request for horizontal increases on all commodities. The I.C.C. made it clear that rates for some traffic, in its opinion, had already reached levels where further increases would adversely affect the railroads financially.

Motor and water carriers generally follow the pattern of the railroads in seeking rate adjustments. They, too, sought increases in many areas of the nation at one time or another during the year but did not ask for increases for all commodities for all territories at one time.

3. Transportation Act of 1958.

The Transportation Act of 1958 modified the Interstate Commerce Act in several important respects. Some of the changes affected farmers, farm organizations and farm suppliers. One such change was to bring under the jurisdiction of I.C.C. the geographical limits within which motor carriers moving certain types of agricultural freight might operate. At the same time it gave I.C.C. jurisdiction over the rates and charges of such carriers. These motor carriers include those engaged in the transportation of frozen fruits, frozen berries, frozen vegetables, cocoa beans, coffee beans, tea, bananas, or hemp, and wool imported from any foreign country, wool tops and noils, or wool waste (carded, spun, woven or knitted).

IV. Regulatory Activities

Current Activities:

These activities involve the administration of the Standard Container, United States Warehouse, Federal Seed, Packers and Stockyards, and Tobacco Plant and Seed Exportation Acts, as well as the regulatory features of the Naval Stores Act. These laws regulate various marketing activities, and the administration of each includes two or more of the following:

- (1) Licensing or registration, (2) supervision of operations of licensees,
- (3) collection and testing of samples, and (4) handling of violations.

Selected Examples of Recent Progress and Trends

1. Federal Seed Act

a. Record Volume of Importations.

During 1959 more than 307.4 million pounds of 110 kinds of agricultural and vegetable seeds were offered for importation from 24 countries. This is the largest amount of seed imported in any one year since the enactment of the law in 1939. The estimated value of this total importation is almost \$19 million. After subjecting samples of these imports to tests, 306.6 million pounds were admitted into the commerce of the United States.

Import Activities

Activity	Fiscal Year					
	: 1956	: 1957	: 1958	: 1959	: 1960(Est.)	: 1961(Est.)
Total import actions ^{1/}	12,677	10,523	15,803	16,472	17,000	18,500
Lots offered for importation.....	12,474	10,411	15,682	16,349	17,000	17,000
Lots permitted entry.....	12,440	10,501	15,614	16,338	16,800	16,800
Lots denied entry.....	34	22	165	160	200	200
Kinds of seed imported.....	112	106	110	110	110	110
Pounds of seed imported (millions).....	235.0	181.6	288.0	307.4	310.0	310.0

^{1/} Includes action taken on lots rejected once and acted on again after cleaning, etc.

b. Interstate Activity.

The number of violations reported on the interstate portion of the Act decreased about 14% from the previous year. About 10% fewer investigations were completed in 1959 than in 1958. Further, investigations pending at the end of 1959 were 30% greater than the year before. This was due to the fact that import activity continued high. Since import work is mandatory, it must be carried on, often at the expense of interstate activity.

A total of 21,725 samples were drawn in 1958-1959 from interstate shipments by 26 States, or an average of 836 per State. The number of samples of interstate shipments drawn and tested in 1958-1959 ranged from 56 in one State to 3,316 in another. Interstate shipments sampled constituted 40% of all samples drawn by authorized State inspectors.

In 1940, approximately 25% of the seed in commercial channels was incompletely or falsely labeled as compared with 9% in 1958. The extent of compliance with State seed laws and the Federal Seed Act since 1946 is revealed in the following summary:

Year	: Proportion of : inspected seed : in violation : of State law	: Proportion of : inspected seed : in interstate : commerce	: Proportion of : inspected seed : in violation of : the Federal Seed Act
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
1946	18	47	7
1951	8	59	6
1954	12	46	9
1956	14	45	8
1958	12	40	9

Interstate Investigations and Actions

Item	Fiscal Year					
	: 1956	: 1957	: 1958	: 1959	: 1960(Est.)	: 1961(Est.)
<u>Cases for investigation:</u>	:	:	:	:	:	:
Total to be investigated...	1,481:	1,292:	1,440:	1,505:	1,750	: 2,000
Investigations completed...	1,126:	926:	865:	769:	850	: 850
Pending at end of year....	355:	366:	575:	736:	900	: 1,050
	:	:	:	:	:	:
<u>Administrative actions:</u>	:	:	:	:	:	:
No action warranted.....	331:	233:	221:	222:	200	: 200
Warnings issued.....	716:	662:	587:	503:	500	: 500
Cited for hearings.....	172:	104:	90:	135:	150	: 150
Seizures recommended.....	4:	9:	6:	2:	5	: 5
Prosecutions recommended..	44:	77:	19:	31:	40	: 40
	:	:	:	:	:	:
<u>Court Actions:</u>	:	:	:	:	:	:
Prosecutions terminated...	9:	13:	19:	21:	30	: 30
Prosecutions pending at	:	:	:	:	:	:
end of year.....	11:	17:	15:	25:	35	: 45
Seizure actions terminated:	7:	8:	1:	5:	5	: 5
Seizure actions pending	:	:	:	:	:	:
at end of year.....	0:	1:	6:	2:	2	: 2

c. Variety Labeling and Testing.

A new kind of crop developed by the Texas Agricultural Experiment Station by crossing Johnsongrass and Sudangrass created a number of problems for seed law enforcement officials. After considerable discussion between personnel in the U. S. Department of Agriculture and interested State experiment stations, the new crop was named "sorghrass." This crop has now been added to the list of kinds subject to the Federal Seed Act.

The Department has cooperated with the Federal Trade Commission in an effort to obtain the cancellation of registration by the Patent Office of trade-marks which are variety names and which should never have been registered. The Department has undertaken to provide the Federal Trade Commission with information that certain registered trade-marks are, in fact, used as variety names and therefore were not eligible for registration by the Patent Office.

- d. Seed Testing. Volume of Seed Testing work is shown in the following table:

Activity	Fiscal Year					
	1956	1957	1958	1959	1960(Est.)	1961(Est.)
Seed samples tested in connection with:	:	:	:	:	:	:
Imports.....	12,804	10,667	15,888	16,717	17,500	19,000
Interstate shipments:	1,926	1,478	1,487	1,574	1,500	3,000
Check tests.....	342	342	961	921	1,000	1,000
Miscellaneous.....	629	1,166	641	806	800	800
Total tests....	15,701	13,653	18,977	20,018	20,800	23,800

- e. Federal Seed Act amended.

Public Law 85-581, approved August 1, 1958, amended the Federal Seed Act particularly with respect to labeling. Changing conditions in the handling and importation of seed made this legislation desirable. The amendment also provided for charging importers for the cost of supervision of reprocessing seed otherwise refused admission. Public hearings on proposed revisions in regulations under the amended Act were held in December 1958 at St. Louis, Missouri. The revised regulations became effective April 29, 1959.

2. Naval stores and tobacco export permits

- a. Naval stores.

During the year, 127 samples, consisting of turpentine, rosin, dipentene, and competing mineral spirits, paint thinners, or small containers therefor bearing labels to be studied, were collected for purposes of checking condition, quality, purity, and proper label description. About 51 dealers and distributors were represented by these samples. There were 26 instances in which some phase of the Act or regulations thereunder was not fully observed by vendors. In these cases corrective action was taken through personal contacts with shippers followed by official correspondence. Continuing surveillance of practices under the Naval Stores Act is holding the number of violations to a minimum.

- b. Tobacco export permits.

The number of certificates issued for exportation of tobacco seed for experimental purposes in 1959 totaled 44 compared with 32 in 1958.

3. Packers and Stockyards Act

- a. Posting and registration activities increased under amended law.
During 1959 the posting workload was greater in volume than ever before in the history of the Act. This was due to the amendment on September 2, 1958 which removed the 20,000-square-foot limitation.

To expedite the posting of all yards, a new posting procedure was initiated. A simple standard form has been devised which is sent to owners of all livestock market facilities. The information contained on this form, when completed, makes it possible to ascertain whether a facility is eligible for posting. This new procedure, by eliminating the personal visitation to each facility, has made it possible to carry out a stockyard posting program unequalled in the history of the Act. In addition to new procedures, several forms used in the posting of stockyards have been revised which has helped to conduct postings more rapidly and more economically.

As of July 1, 1958, there were 600 stockyards posted. During the past fiscal year, 1,048 stockyards were investigated and found eligible for posting. The operators of these yards were notified by mail and by Federal Register publication of the Department's intention to post. As of June 30, 1959, 932 additional stockyards had been posted and were operating under the provisions of the Act. During the year only four yards were deposted. At the close of the year, therefore, there were 1,528 posted stockyards operating and subject to supervision under the provisions of the Act, an increase of 928 over the prior year.

The following table shows the growth over the past several years and estimates for the current and budget years in the posting and registration activities.

Activity	Fiscal Year					
	1956	1957	1958	1959	1960(Est.)	1961(Est.)
Yards posted.....	352	546	600	1,528	2,200	2,300
Market agencies and dealers:	:	:	:	:	:	:
registered.....	5,798	5,996	6,560	7,243	10,000	12,000
Packers under supervision..	1,998	1,979	2,129	2,261	2,500	2,800
Poultry dealers licensed...	1,267	1,176	1,167	1,058	1,050	1,020

The increase in yards posted (1,811 as of November 11, 1959) has greatly expanded the supervision workload. As an interim measure, some initial supervisory functions are being performed through State and sectional meetings within the States. Instruction is given in such items as books and records requirements. As soon as the current heavy posting and registration activity levels off, it will be necessary to shift some of the present funds and personnel to provide for more adequate supervision of the operations of yards and agencies which have been found to be subject to the Act.

b. Unfair trade practices investigated.

Several investigations were conducted as to the practices of market agencies and dealers subject to the provisions of the Act. Some investigations were market-wide, and a large number of irregularities were disclosed involving unfair buying practices, the restriction of competition, failure to account properly, falsification of books and records, and other irregularities warranting formal corrective action. In addition, regular supervisory visits and routine audits disclosed numerous violations warranting either formal or informal corrective action.

The Department has continued its effort to eliminate turn systems at public stockyards and the third favorable decision was received upholding the Department's position relative to this practice. Following the last decision, several markets have voluntarily agreed to discontinue the turn system, rotation system, or any other system to determine the order in which buyers will have the opportunity to look at and bid on livestock.

During the year, studies were made in connection with the weighing of livestock and meat products by packers. The scales and weighing requirements to assure accurate weights were reviewed with State agencies to improve the weighing programs now being conducted jointly. Several weighing investigations were conducted throughout the United States and corrective action taken against those involved in false weights.

Investigations were conducted to determine the legality of merchandising practices of several major packers. These packers had inaugurated innovations in the meat merchandising field and were pursuing more aggressive merchandising policies. Investigations were instituted upon complaints received from competitors.

Formal complaints were issued where investigations disclosed the practice of selling meat at a loss in a particular area to destroy competition, selling meat at unjustly discriminatory low prices to one major chain without making such prices available to that chain's competitors, misrepresentation of grades in advertising, falsifying meat grade certificates, and otherwise causing meat and meat products to be falsely graded or marked. Also, an investigation was conducted as to the practices of packers slaughtering livestock on a consignment basis and selling such meat while at the same time selling meat from livestock slaughtered for their own accounts. As a result of such investigation, a formal complaint was issued and a cease and desist order obtained holding the practice illegal.

Several formal actions were initiated against packers for unfair buying practices. During the year it became apparent that the financial condition of several meat packers would ultimately result in losses to livestock producers and there was a continual failure of a large number of packers to pay promptly for livestock purchased. A study was made of the financial condition of packers and the procedure for handling packer insolvencies was revised to enable the Department to take prompt action in such instances. Formal action was initiated against a packer for failure to pay promptly for livestock purchased.

c. Regulations revised.

As a result of the amendment to the Act, certain technical changes were made in the regulations to bring them into conformance with the Act. The new regulations, promulgated on May 25, 1959, require all market agencies and dealers operating in commerce to register and furnish bond. The registration program is now under way and many applications for registration have been received and are being processed. The total amount of bond coverage under the Act for the protection of livestock producers is now approximately \$49,540,000.

d. Analysis of Formal Proceedings under the Packers and Stockyards Act

Activity	Fiscal Year					
	1956	1957	1958	1959	1960(Est.)	1961(Est.)
Cases pending first	:	:	:	:	:	:
of year.....	40	52	43	103	90	70
New and reopened cases..	74	69	146	67	90	150
Total cases requiring	:	:	:	:	:	:
action.....	114	121	189	170	180	220
Cases disposed of.....	62	78	86	80	110	110
Cases pending end of	:	:	:	:	:	:
year.....	52	43	103	90	70	110

4. Standard Container Acts

About 147 factories were making or equipped to make containers covered by the Acts on June 30, 1959, as compared with 149 in 1958. Tests were made of sample containers obtained from 87 factories. A total of 294 items (2,007 samples) were examined. Of this number 79 or 27% required correction, and 41 corrections were accomplished. Certificates of approval were issued for 18 new types of containers as compared with 17 issued in 1958.

5. United States Warehouse Act

a. Number of Licensed Warehouses Continues to Increase.

The number of warehouses licensed under the Act increased to 1,716 as of June 30, 1959. This was 34 more than a year ago. Of the 1,716 licensed warehouses, 1,145 were for grain, 512 for cotton and the remaining 59 for various other commodities. During the year, 154 new licenses were issued, 107 were cancelled, and 580 were amended.

b. Number of Licensed Warehouses and Capacity by Major Commodity

Year As of June 30	Total Number	C a p a c i t y (millions)	
		Grain (Bushels)	Cotton (Bales)
1940	1,291	187.7	10.1
1946	1,338	271.2	10.6
1950	1,483	380.1	11.0
1955	1,545	645.0	11.8
1956	1,587	711.0	12.6
1957	1,652	774.2	13.5
1958	1,682	846.2	13.3
1959	1,716	1,030.3	13.3
1960 (Est.)	1,750	1,125.0	13.4
1961 (Est.)	1,775	1,150.0	13.4

c. Average Number of Inspections Per Warehouse Decreases.

The average for all warehouses decreased from 1.84 inspections in 1958 to 1.74 in 1959. Cotton examination work progressed at a reasonably adequate rate of 2.29 examinations per year, but grain warehouses were examined only 1.51 times per year.

d. Licenses Suspended.

During 1959 it was necessary to suspend 17 licenses although 10 of these were reinstated by the close of the year.

6. Federal Cost of Regulatory Activities.

Item	1959	1960 (Est.)	1961 (Est.)
Total cost of activity.....	\$2,277,604	\$2,595,600	\$2,880,900
Less reimbursements.....	1,455	--	--
Paid from appropriation.....	2,276,149	2,595,600	2,880,900
Less income to General Revenue Fund of Treasury.....	108,419	110,000	110,000
Net cost to taxpayer.....	2,167,730	2,485,600	2,770,900
Percent of total cost charged to taxpayer.....	91	96	96
Percent of total cost covered by revenue.....	9	4	4

V. Administration and Coordination of State Payments

Current Activities:

This project covers the Federal administration and coordination of the matched-fund cooperative marketing service work performed under the appropriation "Payments to States and Possessions." The purpose of this program is to solve marketing problems at the State and local level through projects proposed and carried out by State Departments of Agriculture but approved and financed in part by the Agricultural Marketing Service. During fiscal year 1959 this work was carried on through 123 projects by 41 States and Puerto Rico. This compares with 132 projects in 43 States in 1958.

Selected Examples of Recent Progress and Trends.

1. Improved programs through closer relationship with cooperating States.
During the year members of the staff visited 39 states cooperating in the program in order to assess the progress being made, counsel with the States concerning operating problems, and to give them the benefit of successful program approaches and techniques used in other States faced with comparable problems.

The visits included a review of the programs to see that only authorized work was underway and an examination of financial accounts to see that funds were adequately matched and that expenditures were in accordance with legal restrictions and administrative policies. Consultations with State officials in charge of administering marketing programs help to provide an effective means of improving the work being carried on under this program.

2. Annual National Workshop at Springfield, Illinois.
During November 1958, a total of 190 persons from 37 States, Canada and the District of Columbia participated in a workshop. The main theme was "Adjusting Marketing Service Programs to Changing Conditions."
3. Revised Reporting Forms and Project Statements.
During the year, transition to the new reporting forms was completed and most of the project statements which were in need of being rewritten were revised to conform to the new procedures. Current project statements were brought in line with present programs.

(b) Payments to States and Possessions

Appropriation Act, 1960 and base for 1961	\$1,195,000
Budget Estimate, 1961	<u>1,195,000</u>

PROJECT STATEMENT

Project	:	1959	:	1960	:	1961
	:		:	(estimated)	:	(estimated)
Payments for marketing serv-	:		:		:	
ice work under sec. 204(b)	:		:		:	
of the Agricultural Market-	:		:		:	
ing Act of 1946	:	\$1,160,000	:	\$1,195,000	:	\$1,195,000

CHANGE IN LANGUAGE

The estimates include a proposed change in the title of this appropriation item as follows (delete matter enclosed in brackets):

Payments to States [, Territories] and Possessions.

The proposed change deletes the word "Territories" from the appropriation title. Hawaii and Alaska statehood makes unnecessary the word "Territories" in the appropriation title.

STATUS OF PROGRAM

Current Activities:

This activity enables State marketing agencies to get practical application of improved marketing practices which research work has developed. These methods and practices aid in maintaining quality, expanding outlets, and reducing deterioration and spoilage of farm products. The program also helps move seasonal surpluses to their best market, reduce marketing costs, and increase returns to farmers from the marketing of their products.

The Federal payments, authorized by Section 204(b) of the Agricultural Marketing Act of 1946, are made under cooperative agreements between the U.S. Department of Agriculture, State Departments of Agriculture, Bureau of Markets, and similar State agencies for the conduct of eligible marketing service activities on a matched fund basis. The States contribute at least half of the costs and perform the work with State personnel.

The amount of the Federal payment to a State is based upon an evaluation of the relative urgency of the marketing service problem confronting the State, the probable effectiveness of the proposed plan for solving or alleviating the problem, the ability of the State to carry out the program proposed, and the availability of matching funds.

Forty-one States and Puerto Rico conducted 123 separate projects under this activity during fiscal 1959. As in most recent years, emphasis has been placed on improving or maintaining product quality and expanding market outlets. With increased funds specifically made available in the 1960 Appropriation Act, the North Dakota Department of Agriculture is conducting work to improve the quality and promote the sale of Red River Valley potatoes.

Selected Examples of Recent Progress:

1. Outlets expanded for Louisiana strawberries. As a result of the promotional assistance provided by the Louisiana Department of Agriculture in cooperation with the Louisiana Strawberry Commission, a large crop of Louisiana strawberries was marketed at satisfactory prices. Sales of Louisiana strawberries increased four-fold in New Orleans and doubled in Baton Rouge, Shreveport, and Jackson, Mississippi compared to sales in previous years when no promotional work was done.
2. Grain Marketing improved in North Carolina. The North Carolina State Department of Agriculture was assisted in improving the

marketing of the State's 30,000,000 bushels cash grain crop. Present facilities can handle only 10,000,000 bushels effectively. Assistance was given to companies which constructed 1,000,000 additional bushels capacity by developing plans for the layout, kinds of machinery to install, and the kind of construction to meet North Carolina conditions. Grades were demonstrated and managers familiarized with use of moisture testers. Eighty-three firms were helped on specific problems. Estimated savings to farmers from this program conducted over a number of years is estimated at 5 to 10 cents a bushel of all cash grain marketed.

3. Milk quality improved in Kansas. Marketing specialists of the State Board of Agriculture helped butter makers, plant graders, and cream station field superintendents obtain a thorough knowledge of the grading systems as well as an explanation of the reasons why some dairy products are down-graded. Assistance was given to dairymen, operators of cream stations, and dairy processing plant personnel in detecting and eliminating sources of contamination, adopting better temperature control procedures, and improving processing methods. In the plants where the program has been in operation, the amount of milk condemned has been reduced by one-half.
4. Tennessee poultry processing plants assisted in meeting requirements of Poultry Products Inspection Act and in reducing operating costs. Assistance was provided 11 Tennessee poultry processing plants in developing practical plans for remodeling existing facilities to reduce operating costs and to meet the facility requirements of the Poultry Products Inspection Act. As a result, these processors were able to maintain outlets for their poultry and poultry products, increase plant operating efficiency, and reduce marketing costs.
5. Seed quality improved in Oregon. Experimental tests with artificial drying and packaging in moisture-proof containers indicate that seed viability can be maintained even under adverse conditions. The application of these methods of preservation will be beneficial in improving the quality of the seed of Alta fescue, Chewings fescue, common rye grass, crimson clover, Highland bentgrass, and Sudengrass, which account for the major part of the \$25-\$35 million seed industry in Oregon.
6. Lean-type pork promoted in Indiana. Processors and marketing firms were encouraged to identify quality, and to quality-price pork products to promote lean-type pork. Data obtained on marketing hogs indicate that substantial premiums through higher prices can be realized for lean-type pork products if they are differentiated through labeling or grading at the retail level. Research findings indicate that it is possible to relay the value of the different grades of pork back to the producer.

7. Wisconsin dairy quality program resulted in increased returns to producers and the dairy industry. The Wisconsin dairy marketing service work has stressed better handling methods and the improvement of processing operations for dairy products. Since the inception of the program in 1951, the proportion of Grade A or AA butter has risen from 41% to nearly 60% of production. The increased revenue obtained by the Wisconsin dairy industry from this program is estimated to be about \$200,000 a year.
8. Illinois program promoted the sale and consumption of dairy products. The Illinois Department of Agriculture, in cooperation with the American Dairy Association, staged dairy festivals, exhibits, and promotional campaigns as a means of increasing sales and consumption of dairy products. Work was done with both wholesale and retail milk salesmen, and consumer information programs were conducted. Schools and institutions were encouraged to increase their consumption of these items. As a result, increase in milk consumption per pupil rose over 12% in the Springfield schools participating in the program.

State Participation by Fields of Work:

This work falls into four general fields; the number of States conducting projects and the distribution of payments under each category is shown below:

	<u>No. of States</u>		<u>Payments</u>	
	1959	1960	1959	1960
(1) Improving and maintaining the quality of agricultural commodities	27	27	364,000	375,000
(2) Increasing markets for agricultural commodities	21	22	355,000	390,000
(3) Increasing marketing efficiency and reducing costs	10	11	106,000	110,000
(4) Assembling and disseminating marketing information, including statistics and data on improved facilities and methods	30	28	335,000	320,000
			<u>1,160,000</u>	<u>1,195,000</u>

Distribution of Payments:

The distribution of payments by States for 1959 and 1960 are shown in the following table.

DISTRIBUTION OF PAYMENTS BY STATES

(In some years a state may participate in the program entirely with funds carried over from prior years. Such states are indicated by asterisk in the applicable fiscal year column.)

State	:	F.Y. 1959	:	F.Y. 1960
Alabama		\$ 20,601		\$ 20,601
Alaska		7,264		7,500
Arkansas		9,000		10,000
California		100,000		100,000
Colorado		6,000		6,000
Florida		43,000		45,600
Georgia		34,773		37,500
Hawaii		4,283		--
Illinois		27,394		27,837
Indiana		32,500		32,500
Iowa		10,000		15,000
Kansas		50,000		50,000
Kentucky		31,548		31,547
Louisiana		66,000		62,350
Maine		55,500		55,500
Maryland		13,239		13,239
Massachusetts		5,018		7,900
Michigan		25,825		25,825
Minnesota		42,494		42,494
Mississippi		53,000		53,000
Missouri		*		4,500
Montana		11,500		11,500
Nebraska		2,500		2,500
New Jersey		37,168		38,000
New Mexico		20,000		20,000
New York		58,000		56,000
North Carolina		65,177		58,698
North Dakota		28,858		63,858

DISTRIBUTION OF PAYMENTS BY STATES

State	F.Y. 1959	F.Y. 1960
Ohio	\$ 9,500	\$ 9,500
Oklahoma	23,000	23,000
Oregon	25,707	25,800
Pennsylvania	29,087	17,450
Puerto Rico	*	--
South Carolina	13,500	22,336
South Dakota	8,755	8,755
Tennessee	18,421	18,421
Texas	17,920	18,237
Vermont	3,681	4,265
Virginia	50,000	48,000
Washington	27,000	27,000
West Virginia	32,000	32,000
Wisconsin	40,787	40,787
Total	1,160,000	1,195,000



(c) School Lunch Program

Appropriation Act, 1960	\$110,000,000
Budget Estimate, 1961	<u>110,000,000</u>

Note: In addition, the 1960 Act provided that \$43,657,248 be transferred from Section 32 funds for purchases of agricultural commodities for distribution to schools. The 1961 Budget proposes a transfer of \$40,000,000 for the same purposes.

PROJECT STATEMENT
(Includes direct appropriation and transfer of
Section 32 funds)

Project	1959	1960 (estimated)	Increase or Decrease	1961 (estimated)
1. Food Assistance:				
(a) Cash payments				
to States	\$93,853,219	\$93,600,000	- -	\$93,600,000
(b) Commodity pro-				
curement	49,080,046	58,397,248	-\$3,657,248	54,740,000
2. Operating Expenses	1,491,745	1,660,000	- - -	1,660,000
Total employee health				
benefit cost				
(P.L. 86-382)	- - -	- - -	[+12,100]	[12,100]
Subtotal a/	144,425,010	153,657,248	-3,657,248	150,000,000
Unobligated balance ...	574,990	- - -	- - -	- - -
Total available or				
estimate	145,000,000	153,657,248	-3,657,248	150,000,000
Transferred from "Re-				
moval of Surplus Ag-				
ricultural Commodi-				
ties"	-35,000,000	-43,657,248	+3,657,248	-40,000,000
Total appropriation				
or estimate	110,000,000	110,000,000	- - -	110,000,000

a/ Represents obligations. Applied costs for 1959 are \$144,345,744, a difference of \$79,236 which reflects, primarily, return of prior year cash payments to States.

EXPLANATION

The 1961 estimates provide for an appropriation of \$110,000,000, the same amount as provided in the 1960 fiscal year, and the continuation of the transfer from Section 32 funds. This transfer of \$40,000,000 proposed for 1961 will enable the Department to furnish commodities under Section 6 of the National School Lunch Act in addition to those made available under the direct appropriation.

Overall, with the funds budgeted under this appropriation item and the \$84,000,000 authorized for the special milk program, total Federal assistance to schools will be at about the same level as in 1960. In addition to such direct assistance, the schools continue to receive donated surplus foods (Section 32 and Section 416-CCC) as they become available.

STATUS OF PROGRAM

The School Lunch Program is designed to:

1. Broaden the market for agricultural food commodities by:
 - a. Providing an expanded market for agricultural commodities through local purchases of food by school lunch programs in commercial channels of trade;
 - b. Serving as a valuable outlet for agricultural commodities purchased by the Department to alleviate local and seasonal surpluses;
 - c. Expanding the outlet for highly nutritious foods, particularly in areas of nutritional deficiencies;
 - d. Introducing a wider variety of foods, thus creating a demand for commodities that many housewives would not otherwise buy.
2. Improve the health and well-being of the Nation's children by:

- a. Providing them a well-balanced lunch at school to help fill their daily nutritional requirements.

Experience indicates that children who get lunch under this program, compared with those who do not, show:

- (1) more rapid gain in weight and height;
 - (2) better attendance records;
 - (3) improvement in scholastic standing;
 - (4) better deportment;
 - (5) higher resistance to colds and other illnesses.
- b. Developing proper and nutritionally beneficial food habits which will continue in later life.

Current activity under the program includes:

1. Furnishing cash assistance to schools for food purchases by:
 - a. Apportioning among the States and Territories a minimum of 75 percent of the total funds available on the basis of need as indicated by:
 - (1) State per capita income compared with United States per capita income;
 - (2) State population of children 5 to 17 years of age.

- b. Making periodic advances of the apportioned funds to State agencies to enable them to reimburse participating schools for a portion of the food costs of lunches served when the schools:
 - (1) agree to operate on a nonprofit basis;
 - (2) serve meals meeting minimum nutritional standards prescribed by the Secretary of Agriculture;
 - (3) offer lunch to all children attending the school and serve it free or at reduced cost to children who are unable to pay the full cost;
 - (4) agree to purchase commodities designated by the Secretary of Agriculture as being in abundance.
 - c. Paying the funds directly to participating private schools in 29 States and Guam where State laws forbid disbursement of Federal funds by State agencies to private schools. (A proportionate share of the State's total apportionment is set aside for this purpose.)
2. Furnishing food items to schools for lunch programs by distributing to schools through State distributing agencies, commodities acquired under:
- a. Section 6, National School Lunch Act. Commodities are purchased on the basis of their nutritional value and acceptability, and distributed to schools participating in the school lunch program under this act. In addition, funds are transferred from Section 32 for the purchase and distribution of agricultural commodities and other foods pursuant to Section 6 of the National School Lunch Act.
 - b. Removal of Surplus Agricultural Commodities (Section 32, Act of August 24, 1935, as amended). Commodities purchased under surplus removal programs are donated to authorized outlets, including all eligible school lunch programs.
 - c. Commodity Credit Corporation. Commodities acquired under price support programs may be donated to authorized outlets, including all eligible school lunch programs. (Section 416, Agricultural Act of 1949, as amended.)
3. Furnishing administrative and technical assistance to State agencies and participating schools with respect to:
- a. management of funds
 - b. purchase and storage of food
 - c. proper use of equipment
 - d. preparation and serving of meals
 - e. maintenance of records and preparation of reports
 - f. development of recipes, particularly to utilize donated and plentiful commodities
 - g. reasons for participation and nonparticipation in program

4. Making reviews and audits which provide for:

- a. annual audits of the records of State agencies and selected schools;
- b. comprehensive administrative analyses of State agencies' operations under the program;
- c. administrative reviews in individual schools.

Program policy is to encourage and assist State educational agencies to assume increasing responsibility for the administration of the program. In addition to the responsibility for the administrative review of individual programs which all States have assumed, 17 States have assumed responsibility for the individual school audit programs and several additional States have indicated an interest for assuming this responsibility.

Examples of recent progress and trends:

During the year, work continued in cooperation with a group of State School Lunch Directors on a study of the long range needs and financing of the School Lunch Program.

The School Lunch Program furnished noon-day meals to over 30% of the Nation's 39,480,000 school children in the fiscal year 1959. This program also utilized 3.0 billion pounds of food, of which 2.5 billion pounds were purchased in local markets and .5 billion pounds were donated by the Department.

A. Peak month participation was 12.1 million children in 1959 - 5% over 1958

Participation in the National School Lunch Program
Fiscal Years 1958 and 1959, by month

Month	:Number of Schools:		Number of Children	
	:	Fiscal Years		
	: 1958	: 1959	: 1958	: 1959
July	: 1,096	: 971	: 153,611:	135,535
August	: 4,936	: 4,704	: 644,863:	625,992
September	: 56,503	: 57,843	:10,809,204:	11,313,603
October	: 58,530	: 59,514	:10,703,195:	11,637,576
November	: 59,442	: 60,915	:11,195,878:	11,981,781
December	: 59,929	: 61,033	:11,492,530:	12,124,464
January	: 60,196	: 61,537	:11,257,144:	11,988,184
February	: 60,239	: 61,614	:11,168,048:	11,710,645
March	: 60,519	: 61,576	:10,924,923:	11,349,862
April	: 59,745	: 61,114	:10,693,975:	11,253,921
May	: 57,181	: 58,682	:10,257,699:	10,860,989
June	: 15,036	: 15,362	: 2,845,021:	2,996,092
Average, Sept.-June..	: 54,732	: 55,919	:10,134,761:	10,721,712
Peak Number	: 60,519	: 61,614	:11,492,530:	12,124,464
Peak Month	: March	:February:	December	: December

Year to year comparisons in number of schools participating are affected by the school consolidation program.

B. Selected Statistical Material and Analyses:

The following tables present analyses of the growth and scope of the School Lunch Program:

Table I - Source of Funds, Matching Requirements and
and I-a Participation, in the first year of operation and the latest 4 years, and analyses.

Table II - Apportionment Basis, by States, 1960.

Table III - Federal and State Financing 1959, by States

Table IV - Children and Schools Participating 1959, by States.

Table V - Commodities Distributed in 1958 and 1959, by quantity and cost.

UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service

TABLE I

School Lunch Program

Source of Funds including Special Milk, Matching Requirements and Participation in the Program
Fiscal Year 1947 (First year) and Fiscal Years 1957 - 1960

Item	1947	1957	1958	1959	1960 (Est.)
1. Method of Financing Program					
Contributions from Federal Sources					
a. <u>Direct appropriation</u>					
School Lunch Act					
Cash payments-Food (obligations).....	\$59,853,146	\$83,775,269	\$83,735,462	\$ 93,853,219	\$93,600,000
Section 6 (distribution) 1/	5,735,269	14,659,931	14,802,256	3/ 42,669,843	3/ 58,397,248
Total	65,588,415	98,435,200	98,537,718	136,523,062	151,997,248
b. <u>Donated Commodities</u>					
Section 32	2,312,479	112,496,228	61,781,775	44,414,788	xxx
C.C.C. (416)	-	19,475,774	14,180,058	22,406,903	xxx
P. L. 471	-	-	-	-	-
Total	2,312,479	131,972,002	75,961,833	66,821,691	67,800,000
c. <u>Special Milk Program</u>	-	60,023,914	65,182,562	72,600,189	77,800,000
Total, Federal Contributions.....	67,900,894	290,431,116	239,682,113	275,944,942	297,597,248
Contributions from State Sources					
a. <u>Direct appropriation</u>					
State and local	20,616,000	71,671,000	83,623,000	90,368,000	100,000,000
b. <u>Other local contributions</u>	17,532,000	83,651,000	98,018,000	113,980,000	120,000,000
c. <u>Payments by children</u>	112,540,000	418,151,000	453,227,000	505,099,000	560,000,000
Total, State Contributions	150,688,000	573,473,000	634,868,000	709,447,000	780,000,000
Total Contributions (Federal and State)	218,588,894	863,904,116	874,550,113	985,391,942	1,077,597,248
2. Matching 2/					
Federal apportionment of cash to States	62,338,155	83,915,000	83,830,000	93,890,000	93,600,000
Required by States	55,877,690	211,218,187	211,123,000	236,667,967	Not Available
Contributed by States	150,688,000	573,473,000	634,868,000	709,447,000	780,000,000
3. School Enrollment (Thousands)	26,600	36,700	38,400	39,500	42,700
4. Participation in Program					
a. <u>Number of schools</u> (Month of peak participation by children)	44,537	57,261	59,929	61,033	62,000
b. <u>Number of children</u> (Peak-thousands):	6,016	10,656	11,493	12,124	12,800
Type A and B lunches	4,506	10,588	11,429	12,054	12,740
Type C lunches	1,510	68	64	70	60
c. <u>Number of meals served</u> (Millions)	910.9	1,777.2	1,882.6	2,008.7	2,130.0
Type A:					
With Milk - Number (Millions)	527.4	1,738.4	1,846.5	1,995.0	2,117.0
Percent of total	57.9	97.8	98.1	99.3	99.4
Without Milk - Number (Millions)	129.6	26.6	24.5	3.1	3.0
Percent of total	14.2	1.5	1.3	.2	.1
Type B:					
With Milk - Number (Millions)	17.8	1.9	2.0	-	-
Percent of total	2.0	.1	.1	-	-
Without Milk - Number (Millions)	7.4	.3	.1	-	-
Percent of total	.8	Less than .05	Less than .05	-	-
Type C - Number (Millions)	228.7	10.0	9.5	10.6	10.0
Percent of total	25.1	.6	.5	.5	.5
d. <u>Number of free or reduced-price lunches served</u> (Millions)	109.4	186.0	202.9	209.5	213.0
Free or reduced-price lunches as percent of total lunches served	12.0	10.5	10.8	10.4	10.3
5. Foods bought in local Markets with Federal cash payments and State contributions	\$128,648,278	\$400,822,056	\$469,162,104	\$509,778,321	\$540,000,000
6. Total appropriation	81,000,000	100,000,000	100,000,000	3/ 145,000,000	3/ 153,657,248

1/ 1947-represents year in which commodities were distributed; not necessarily year in which funds were expended. 1957-1958 distributions were made in year in which funds were expended. Differences between expenditures and distributions in these years result from loss in transit, failure to meet specifications, and other program adjustments. In 1959, approximately \$6.4 million commodities purchased late in the year and delivered to the States will be distributed to the schools in 1960.

2/ Matching requirements are as follows: 1947-1950 \$1.00 to \$1.00; 1951-1955 \$1.50 to \$1.00; thereafter \$3.00 to \$1.00 EXCEPT that for States with per capita income below the National average the ratio required is decreased by the percentage which the State per capita income is below the per capita income of the United States. Lowest matching requirement for 1947-1950 was \$.46 to \$1.00; for 1951-1955 \$.73 to \$1.50, and 1956-1960 \$1.41 to \$3.00.

3/ Includes \$35,000,000 in 1959 and \$43,657,248 in 1960 authorized to be transferred from Section 32 for the purchase and distribution of agricultural commodities. 4/ Preliminary.

Analyses of Source of Funds, Matching Requirements and Participation in the Program
Fiscal Year 1947 (First Year) and Fiscal Years 1957-1960

Item	a/ 1947	1957	1958	1959	1960 Prelim.
1. Total cost per lunch (includes all lunches except Type C)	30.8¢	45.4¢	43.2¢	45.7¢	47.2¢
a. Federal contributions (excl. Special Milk) ...	9.7	13.0	9.3	10.2	10.4
b. State and local contributions	5.6	8.8	9.7	10.2	10.4
c. Children's payments	15.5	23.6	24.2	25.3	26.4
2. Average rate of reimbursements from Federal cash payments per Type A lunch	8.7	4.7	4.4	4.7	4.4
3. Annual contribution per child: (Excludes children participating in Type C Programs)	\$46.68	\$75.92	\$70.80	\$75.72	\$78.49
a. Federal (Excludes Special Milk):					
Cash payments	12.97	7.91	7.32	7.79	7.35
Donated commodities	1.79	13.85	7.94	9.08	9.91
Total, Federal	14.76	21.76	15.26	16.87	17.26
b. State and local contributions	8.47	14.67	15.89	16.95	17.27
c. Children's payments	23.45	39.49	39.65	41.90	43.96
4. Percent of enrollment participating	16.9%	28.9%	29.8%	30.5%	29.8%
5. Average number of children participating per school.	101	184	191	198	206

a/ Participation in the Type C lunch decreased rapidly after enactment of the Special Milk Program in 1955. To show comparability, funds and participation have been adjusted by the Type C contributions.

TABLE II

UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service

NATIONAL SCHOOL LUNCH PROGRAM

APPORTIONMENT BY STATES OF FUNDS AVAILABLE FOR THE NATIONAL SCHOOL LUNCH PROGRAM
FISCAL YEAR 1960

SL-1-60

STATE	PER CAPITA INCOME IN 1957 (U.S. \$2,027) (1)	PER CAPITA INCOME INDEX a/ (2)	POPULATION 5-17 YEARS JULY 1, 1957: (3)	STATE INDEX b/ (4)	STATE QUOTIENT (5)	TOTAL APPORTIONMENT c/ (6)	STATE AGENCY (7)	PRIVATE SCHOOLS (8)	MATCHING PERCENT REQUIRED d/ (9)
Alabama	1,324	1.53097	867,000	1,327,350.99	.0294625	2,757,690	2,669,414	88,276	195.95460
Alaska	2,500	.81080	42,000	34,053.60	.0007559	70,752	70,752	--	300.00000
Arizona	1,750	1.15829	282,000	326,637.78	.0072502	678,619	616,190	62,429	259.00344
Arkansas	1,151	1.76108	475,000	836,513.00	.0185676	1,737,927	1,700,586	37,341	170.35026
California	2,523	.80341	3,087,000	2,480,126.67	.0550500	5,152,680	5,152,680	--	300.00000
Colorado	1,996	1.01553	400,000	406,212.00	.0090165	843,944	767,062	76,882	295.41195
Connecticut	2,821	.71854	493,000	354,240.22	.0078629	735,967	735,967	--	300.00000
Delaware	2,740	.73978	98,000	72,498.44	.0016092	150,621	122,472	28,149	300.00000
District of Col.	2,514	.80628	145,000	116,910.60	.0025950	242,892	242,892	--	300.00000
Florida	1,836	1.10403	933,000	1,030,059.99	.0228637	2,140,042	2,016,199	123,843	271.73163
Georgia	1,431	1.41649	1,013,000	1,434,904.37	.0318498	2,981,141	2,981,141	--	211.79082
Guam	1,840	(2.11587)	18,000	38,085.66	.0008454	79,129	66,513	12,616	272.32362
Hawaii	1,821	1.11312	153,000	170,307.36	.0037802	353,827	290,697	63,130	269.51160
Idaho	1,630	1.24356	173,000	215,135.88	.0047752	446,959	428,528	18,431	241.24323
Illinois	2,447	.82836	2,134,000	1,767,720.24	.0392371	3,672,593	3,672,593	--	300.00000
Indiana	2,010	1.00846	1,074,000	1,083,086.04	.0240406	2,250,200	2,250,200	--	297.44396
Iowa	1,806	1.12237	655,000	735,152.35	.0163178	1,527,346	1,338,725	188,621	267.29157
Kansas	1,787	1.13430	486,000	551,269.80	.0122362	1,145,308	1,145,308	--	264.47952
Kentucky	1,372	1.47741	801,000	1,183,405.41	.0262674	2,458,629	2,458,629	--	203.05872
Louisiana	1,566	1.29438	820,000	1,061,391.60	.0235591	2,205,132	2,205,132	--	231.77109
Maine	1,663	1.21888	223,000	271,810.24	.0060332	564,708	478,476	86,232	246.12729
Maryland	2,156	.94017	687,000	645,896.79	.0143366	1,341,906	1,117,459	224,447	300.00000
Massachusetts	2,335	.86809	1,023,000	888,056.07	.0197117	1,845,015	1,845,015	--	300.00000
Michigan	2,141	.94675	1,861,000	1,761,901.75	.0391079	3,660,500	3,115,930	544,570	300.00000
Minnesota	1,850	1.09568	804,000	880,926.72	.0195534	1,830,198	1,520,872	309,326	273.80364
Mississippi	.953	2.11587	611,000	1,292,795.57	.0286955	2,605,899	2,605,899	--	141.78588
Missouri	1,940	1.04485	935,000	976,934.75	.0216845	2,029,669	2,029,669	--	287.12382
Montana	1,896	1.06909	168,000	179,607.12	.0039866	373,146	332,148	40,998	280.61175
Nebraska	1,818	1.11496	331,000	369,051.76	.0081916	766,734	659,637	107,097	269.06760
Nevada	2,423	.83657	59,000	49,357.63	.0010956	102,548	95,720	6,828	300.00000
New Hampshire	1,862	1.08861	130,000	141,519.30	.0031412	294,016	294,016	--	275.57967
New Jersey	2,504	.80950	1,209,000	978,685.50	.0217233	2,033,301	1,582,950	450,351	300.00000
New Mexico	1,686	1.20225	233,000	280,124.25	.0062178	581,986	581,986	--	249.53133
New York	2,578	.78627	3,361,000	2,642,653.47	.0586575	5,490,342	5,490,342	--	300.00000
North Carolina	1,317	1.53910	1,198,000	1,843,841.80	.0409267	3,830,739	3,830,739	--	194.91861
North Dakota	1,435	1.41254	169,000	238,719.26	.0052987	495,958	441,341	54,617	212.38284
Ohio	2,255	.89889	2,135,000	1,919,130.15	.0425979	3,937,164	3,371,956	615,208	300.00000
Oklahoma	1,619	1.25201	547,000	684,849.47	.0152012	1,422,832	1,422,832	--	239.61519
Oregon	1,914	1.05904	413,000	437,383.52	.0097084	908,705	908,705	--	283.27578
Pennsylvania	2,112	.95975	2,450,000	2,351,387.50	.0521924	4,885,209	3,855,223	1,029,986	300.00000
Puerto Rico	.475	(2.11587)	742,000	1,569,975.54	.0348479	3,261,764	3,261,764	--	70.30095
Rhode Island	1,990	1.01859	181,000	184,364.79	.0040922	383,030	383,030	--	294.52392
South Carolina	1,180	1.71780	683,000	1,173,257.40	.0260421	2,437,541	2,400,417	37,124	174.64233
South Dakota	1,531	1.32397	173,000	229,046.81	.0050840	475,862	475,862	--	226.59102
Tennessee	1,383	1.46565	883,000	1,294,168.95	.0287259	2,688,744	2,599,216	89,528	204.68673
Texas	1,791	1.13177	2,322,000	2,627,969.94	.0583316	5,459,838	5,136,702	323,136	265.07154
Utah	1,694	1.19658	233,000	278,803.14	.0061884	579,234	567,374	11,860	250.71534
Vermont	1,665	1.21742	90,000	109,567.80	.0024320	227,635	227,635	--	246.42330
Virginia	1,660	1.22108	946,000	1,155,141.68	.0256400	2,399,904	2,279,843	120,061	245.68329
Virgin Islands	.580	(2.11587)	9,700	20,523.94	.0004556	42,644	42,644	--	85.84113
Washington	2,128	.95254	644,000	613,435.76	.0136161	1,274,467	1,184,068	90,399	300.00000
West Virginia	1,554	1.30438	528,000	688,712.64	.0152870	1,430,863	1,389,097	41,766	229.99506
Wisconsin	1,920	1.05573	916,000	967,048.68	.0214650	2,009,124	1,541,946	467,178	284.16378
Wyoming	2,038	.99460	81,000	80,562.60	.0017882	167,376	167,376	--	300.00000
TOTAL	--	--	41,127,700	45,052,275.29	1.0000000	93,600,000	88,249,570	5,350,430	--

a/ United States per capita income (\$2,027) divided by State per capita income, except for Guam, Puerto Rico and the Virgin Islands which are assigned the same per capita income index as Mississippi in accordance with the amendment to Section 4 of the National School Lunch Act. This amendment provides that the apportionment to Guam, Puerto Rico and the Virgin Islands shall not exceed 3 percent of the funds appropriated except that in the case of the first apportionment from any annual or supplemental appropriation, the apportionment to Guam, Puerto Rico and the Virgin Islands shall not be less than that amount which will result in an allotment per child of school age equal to the allotment per child of school age in the State (other than Guam, Puerto Rico and the Virgin Islands) having the lowest per capita income among the States participating in such first apportionments.

b/ Per capita income index multiplied by population of ages 5-17, inclusive.

c/ Total of funds apportioned multiplied by State quotients. Under the National School Lunch Act, as amended, not less than 75 percent of the total funds available must be apportioned to the States and Territories. Breakdown between State agency and private schools is based on relative enrollment in public and nonprofit private schools as provided in Section 10 of the National School Lunch Act for any State in which the State Educational Agency by law is not permitted to disburse funds paid to it under this Act to nonprofit private schools.

d/ According to Section 7 of the National School Lunch Act, during fiscal year 1960 each State must match three dollars for each dollar of the Federal Government's apportionment to the State, except that, in the case of a State in which the per capita income is below that of the United States, the matching ratio required is decreased by the percentage which the State's per capita income is below the per capita income of the United States. The actual amount of funds required for matching is then determined by taking this percentage of the amount of the total Federal apportionment to the State.

FDD-7/27/59

Agriculture - Washington

UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service

TABLE III

School Lunch and Special Milk Programs

Comparison of Federal and State Financing for the Fiscal Year 1959

State	Commodity Distribution		Federal		Special		Total		State and		Total		Federal	
	Section a/	Donated b/	Cash	Apportionment	Milk c/	Federal	Total	Local d/	Financing	and State	Federal	Contributions	as % of	Total
			N S L P		Program	Contribution								
Alabama		\$1,350,161	\$2,466,414	\$2,903,619	\$1,089,567	\$7,809,761	\$15,210,000	\$23,019,761					33.9%	
Alaska		15,819	64,644	62,167	17,657	160,287	376,000	536,287					29.9	
Arizona		324,938	588,548	681,795	444,014	2,039,295	5,855,000	7,894,295					25.8	
Arkansas		745,725	1,396,008	1,805,875	658,467	4,606,075	7,318,000	11,924,075					38.6	
California		2,071,836	3,802,236	5,022,644	7,132,989	18,029,705	48,674,000	66,703,705					27.0	
Colorado		374,452	703,527	854,083	568,095	2,500,157	7,476,000	9,976,157					25.1	
Connecticut		351,976	655,551	739,771	833,748	2,581,046	9,450,000	12,031,046					21.4	
Delaware		55,658	93,019	111,421	187,765	447,863	2,167,000	2,614,863					17.1	
District of Columbia		30,650	80,510	239,042	370,845	721,047	1,460,000	2,181,047					33.0	
Florida		1,614,308	1,834,793	1,996,686	1,270,671	6,716,458	26,740,000	33,456,458					20.1	
Georgia		1,894,908	2,252,867	2,956,783	955,102	8,059,660	22,761,000	30,820,660					26.1	
Guam		2,069	13,853	9,068	-	24,990	55,000	79,990					31.2	
Hawaii		392,338	349,914	338,613	171,573	1,252,438	6,116,000	7,368,438					17.0	
Idaho		205,592	295,770	436,498	181,608	1,119,468	2,607,000	3,726,468					30.0	
Illinois		1,540,812	2,050,639	3,577,703	5,490,326	12,659,480	41,133,000	53,792,480					23.5	
Indiana		1,026,224	1,442,480	2,226,431	1,674,103	6,369,238	16,620,000	22,989,238					27.7	
Iowa		854,797	1,116,568	1,614,615	1,588,368	5,174,348	13,825,000	18,999,348					27.2	
Kansas		489,850	1,055,775	1,193,034	790,712	3,529,371	7,305,000	10,834,371					32.6	
Kentucky		1,324,324	1,824,784	2,495,511	1,207,159	6,851,778	13,413,000	20,264,778					33.8	
Louisiana		2,041,033	2,533,134	2,311,384	431,465	7,317,016	22,732,000	30,049,016					24.3	
Maine		295,011	359,343	548,491	288,803	1,491,648	3,306,000	4,797,648					31.1	
Maryland		533,618	548,931	1,218,451	1,457,034	3,758,034	14,836,000	18,594,034					20.2	
Massachusetts		792,523	1,693,899	1,916,444	2,732,314	7,135,180	21,708,000	28,843,180					24.7	
Michigan		969,310	1,846,305	3,473,194	4,314,509	10,603,318	21,297,000	31,900,318					33.2	
Minnesota		973,575	1,281,564	1,861,859	2,075,290	6,192,288	14,627,000	20,819,288					29.7	
Mississippi		994,150	1,162,728	2,626,110	1,008,248	5,791,236	9,220,000	15,011,236					38.6	
Missouri		1,194,603	1,476,479	2,049,425	1,989,858	6,710,365	19,637,000	26,347,365					25.5	
Montana		182,764	238,213	363,009	141,083	925,069	2,112,000	3,037,069					30.4	
Nebraska		248,160	406,982	841,314	436,991	1,933,447	4,531,000	6,464,447					29.9	
Nevada		41,969	65,794	96,664	72,097	276,524	676,000	952,524					29.0	
New Hampshire		128,304	178,285	289,614	201,774	797,977	2,089,000	2,886,977					27.6	
New Jersey		495,469	1,002,364	1,885,114	1,814,619	5,197,566	13,090,000	18,287,566					28.4	
New Mexico		194,504	630,760	646,322	601,625	2,073,211	3,610,000	5,683,211					36.5	
New York		2,300,182	3,835,892	5,726,837	8,502,345	20,365,256	65,541,000	85,906,256					23.7	
North Carolina		1,937,548	2,571,310	3,770,430	1,270,036	9,549,303	22,862,000	32,411,303					29.5	
North Dakota		164,265	296,430	504,394	257,415	1,222,504	2,463,000	3,685,504					33.2	
Ohio		1,733,256	2,671,161	3,991,954	4,435,111	12,831,482	35,035,000	47,866,482					26.8	
Oregon		458,519	642,379	879,979	472,196	2,453,073	7,175,000	9,628,073					25.5	
Oklahoma		674,178	1,646,411	1,455,004	794,373	4,569,966	8,151,000	12,720,966					35.9	
Pennsylvania		2,109,764	3,107,328	4,978,099	3,294,822	13,490,013	40,070,000	53,560,013					25.2	
Puerto Rico		434,722	2,433,686	3,423,186	-	6,291,594	6,183,000	12,474,594					50.4	
Rhode Island		86,612	125,903	363,075	295,570	871,160	2,677,000	3,548,160					24.5	
South Carolina		1,059,295	1,482,870	2,471,517	524,075	5,537,757	12,722,000	18,259,757					30.3	
South Dakota		130,199	263,131	528,879	372,274	1,294,483	1,993,000	3,287,483					39.4	
Tennessee		1,540,883	2,893,628	2,770,157	1,643,377	8,848,045	16,302,000	25,150,045					35.2	
Texas		2,244,237	2,924,146	5,483,159	2,327,097	12,978,639	29,979,000	42,957,639					30.2	
Trust Territories		-	89,539	-	-	89,539	-	89,539					100.0	
Utah		435,346	677,589	575,245	178,288	1,866,468	4,425,000	6,291,468					29.7	
Vermont		74,356	87,050	227,692	144,461	533,559	1,022,000	1,555,559					34.3	
Virgin Islands		19,763	40,901	38,516	-	99,180	173,000	272,180					36.4	
Virginia		1,293,488	2,137,833	2,294,146	1,453,321	7,178,788	19,649,000	26,827,788					26.7	
Washington		844,905	1,039,226	1,276,291	1,207,042	4,367,464	11,641,000	16,008,464					27.3	
West Virginia		575,453	1,207,336	1,552,115	389,224	3,724,128	6,960,000	10,684,128					34.8	
Wisconsin		704,120	1,042,073	1,977,401	2,699,681	6,423,275	11,105,000	17,528,275					36.6	
Wyoming		97,322	93,188	172,410	141,002	503,225	1,287,000	1,790,225					28.1	
Total		42,669,843	66,821,691	93,853,219	72,600,189	275,944,942	709,447,000	985,391,942					28.0	

a/ Commodities procured under the School Lunch appropriation and under funds transferred to this appropriation from the fund authorized under section 32 of the act of August 24, 1935, as amended, are distributed pursuant to sec. 6 of the National School Lunch Act.

b/ Commodities acquired under price support programs by the Commodity Credit Corporation and donated to schools pursuant to sec. 416 of the Agricultural Act of 1949, as amended, and commodities acquired and donated under authority of section 32 of the act of August 24, 1935, as amended.

c/ Cash payments are made to reimburse schools for increased consumption of milk by children, pursuant to sec. 201(c) of the Agricultural Act of 1954, as amended.

d/ Contributions from the several sources within the States--State and local government contributions, other local contributions, and payments by children.

TABLE IV

UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service
Washington 25, D. C.

NATIONAL SCHOOL LUNCH PROGRAM

SL-2-59
Revised

NUMBER OF CHILDREN AND SCHOOLS PARTICIPATING
Fiscal Year 1959 1/

STATE	CHILDREN IN ELEMENTARY AND SECONDARY SCHOOLS			ELEMENTARY AND SECONDARY SCHOOLS	
	Total	Number	Percent	Number	
	Enrollment 2/	Participating	Participation	Participating	
	(1)	(2)	(3)	(4)	
NORTHEAST					
Connecticut	515,072	120,794	23.5	577	
Delaware	88,701	22,414	25.3	115	
District of Columbia 3/	135,840	8,650	6.4	21	
Maine	224,432	66,954	29.8	603	
Maryland	659,340	161,196	24.4	806	
Massachusetts	1,029,780	255,718	24.8	1,109	
New Hampshire	129,683	38,223	29.5	319	
New Jersey	1,221,670	176,176	14.4	863	
New York	3,342,842	771,762	23.1	3,387	
Pennsylvania	2,404,481	528,374	22.0	2,328	
Rhode Island	169,695	28,773	17.0	157	
Vermont	86,921	30,504	35.1	294	
West Virginia	471,925	178,737	37.9	1,549	
Area	10,480,382	2,388,275	22.8	12,153	
SOUTHEAST					
Alabama	804,640	339,892	42.2	1,416	
Florida	902,263	406,237	45.0	1,242	
Georgia	909,091	436,904	48.1	1,737	
Kentucky	682,827	318,759	46.7	1,413	
Mississippi	569,760	226,660	39.8	930	
North Carolina	1,074,651	544,263	50.6	1,757	
Puerto Rico	610,797	231,086	37.8	1,843	
South Carolina	566,382	290,322	51.3	1,155	
Tennessee	794,986	351,528	44.2	1,924	
Virginia	843,269	305,739	36.3	1,398	
Virgin Islands	8,835	5,347	60.5	29	
Area	7,767,501	3,456,737	44.5	14,844	
MIDWEST					
Illinois	2,053,295	470,578	22.9	2,748	
Indiana	1,014,550	334,225	32.9	1,506	
Iowa	629,043	253,632	40.3	1,385	
Michigan	1,857,484	324,170	17.5	1,774	
Minnesota	776,290	318,602	41.0	1,433	
Missouri	913,549	333,778	36.5	2,376	
Nebraska	308,118	83,011	26.9	547	
North Dakota	142,733	63,212	44.3	719	
Ohio	2,080,727	577,241	27.7	2,296	
South Dakota	158,938	45,590	28.7	372	
Wisconsin	869,210	229,746	26.4	1,959	
Area	10,803,937	3,033,785	28.1	17,115	
SOUTHWEST					
Arkansas	430,010	195,292	45.4	977	
Colorado	393,102	119,657	30.4	779	
Kansas	480,960	144,774	30.1	1,121	
Louisiana	769,851	563,419	73.2	1,574	
New Mexico	227,177	67,275	29.6	412	
Oklahoma	556,383	186,180	33.5	1,651	
Texas	2,070,120	556,488	26.9	2,933	
Area	4,927,603	1,833,085	37.2	9,447	
WESTERN					
Alaska	38,248	5,220	13.6	36	
Arizona	295,234	88,354	29.9	390	
California	3,296,900	580,372	17.6	3,125	
Guam	15,322	363	2.4	2	
Hawaii	161,207	98,837	61.3	197	
Idaho	155,618	57,902	37.2	430	
Montana	152,901	46,065	30.1	490	
Nevada	59,856	10,721	17.9	79	
Oregon	385,335	134,517	34.9	740	
Utah	222,337	87,720	39.5	408	
Washington	636,980	204,163	32.1	1,168	
Wyoming	80,878	27,947	34.6	204	
Area	5,500,816	1,342,181	24.4	7,269	
Grand Total	39,480,239	12,054,063	30.5	60,803	

- 1/ Data are for December 1958 and represent the average number of children participating in the program for that month. The number of schools and children may have been higher in some States during other months but December was the peak month of participation nationally.
- 2/ Source: Latest data available from U. S. Office of Education. Enrollment data for public schools is for Fall 1958. Private school enrollment is for 1955-56.
- 3/ Data for Alaska, the District of Columbia and Guam do not include participation in the Type C, or milk only, lunch authorized under the National School Lunch Program. Reimbursement for this type has been discontinued in the other States.

Commodities Distributed to the School Lunch Programs during
Fiscal Years 1958 and 1959:

Program and Commodity	Fiscal Year 1958		Fiscal Year 1959 a/	
	Pounds	Dollars b/	Pounds	Dollars c/
<u>Direct Purchases:</u>	:	:	:	:
<u>Section 6:</u>	:	:	:	:
Apples & Applesauce.	- -	\$ - -	39,334,266	\$3,832,093
Beans, canned	9,454,485	1,053,230	15,820,566	1,661,159
Beef, frozen ground..	16,754,109	6,743,529	- -	- -
Blackberries	- -	- -	4,177,101	574,769
Corn, canned	- -	- -	9,827,103	1,021,036
Cherries, canned ...	9,099,527	1,261,194	- -	- -
Eggs	- -	- -	6,623,241	7,806,814
Grapefruit sections.	- -	- -	11,292,750	1,637,449
Peaches, canned	25,683,916	3,056,386	26,865,295	3,274,879
Peas, canned	10,843,354	995,420	16,023,822	1,442,144
Pork, frozen	- -	- -	20,067,991	9,624,609
Tomatoes, canned ...	17,538,830	1,692,497	18,537,573	1,829,658
Tomato paste	- -	- -	11,693,265	1,503,754
Turkeys	- -	- -	23,576,146	8,461,479
Total, Section 6..	89,374,221	14,802,256	203,839,119	42,669,843
a/ Includes commodities purchased with funds transferred from Section 32.	:	:	:	:
b/ Excludes \$7,087 representing loss in shipment and failure to meet specification.	:	:	:	:
c/ Excludes \$6.4 million of commodities to be distributed to schools in 1960.	:	:	:	:
<u>Donated Commodities:</u>	:	:	:	:
<u>Section 32:</u>	:	:	:	:
Butter	67,320,738	41,584,020	49,708,437	30,359,100
Cabbage	- -	- -	3,362,400	92,802
Cheese	24,880,407	9,837,713	26,426,784	9,436,179
Eggs, dried	4,618,761	5,231,209	115,572	129,995
Grapefruit sections.	6,460,728	868,968	- -	- -
Milk	18,925,000	3,415,962	17,899,295	3,181,581
Peanut butter	4,926,460	843,903	6,039,421	1,215,131
Total, Section 32.	127,132,094	61,781,775	103,551,909	44,414,788
<u>Section 416:</u>	:	:	:	:
Beans	17,915,346	1,556,844	4,441,960	417,544
Butter	1,546,623	992,158	14,855,016	9,218,297
Cheese	8,001,434	3,305,392	10,286,205	3,975,076
Cornmeal	16,553,907	1,120,700	14,966,120	718,374
Flour	58,680,540	4,553,610	75,030,403	4,666,891
Milk	2,173,599	411,027	6,506,439	1,094,304
Rice	19,738,562	2,240,327	20,003,600	2,316,417
Total, Section 416..	124,610,011	14,180,058	146,089,743	22,406,903
TOTAL	341,116,326	90,764,089	453,480,771	109,491,534

STATUS OF THE SPECIAL MILK PROGRAM

Authority

The Special Milk Program was initially authorized to operate in non-profit schools of high school grade and under. Late in fiscal year 1956, legislation was enacted to expand the program to nonprofit summer camps and child-care institutions devoted to the care and training of underprivileged children on a special welfare or charitable basis. In July 1956, the legislation was amended to further expand the program to all nonprofit summer camps and child-care institutions devoted to the care and training of children. The program has been extended through fiscal year 1961 with an authorization to use Commodity Credit Corporation funds up to \$81 million for fiscal year 1960 and \$84 million for 1961.

Purpose

The primary objective of the program is to increase the consumption of fluid milk by children.

Operation

1. Assistance is provided, in the form of reimbursement payments, to eligible schools and child-care institutions to help them to inaugurate a milk service or to expand the existing service through reducing prices to children and establishing new times of service.
 - a. Until March 1, 1960 the maximum rate of reimbursement in schools and institutions where milk is sold as a separately priced item is 3 cents per half pint except for schools which also serve Type A lunches in the National School Lunch Program. The latter may receive up to 4 cents reimbursement per half pint but may not claim reimbursement for milk served as part of the Type A lunch under the National School Lunch Program. Effective March 1, 1960, the maximum authorized rate in schools where milk is offered as a separately priced item will become 3 1/2 cents for schools that participate in the National School Lunch Program and 2 1/2 cents for other schools.
 - b. In those schools and child-care institutions that do not sell milk as a separate item, the reimbursement rate is 2¢ per half pint for all milk served to children. In order to qualify for participation in the program such schools, camps and institutions must submit for approval the specific methods and practices by which they will increase milk consumption under the program.
2. Procedures have been established to assure that maximum use of the reimbursement payments is made to reduce the price of milk to children as a means of encouraging increased consumption. The amount of reimbursement provided within the maximum established rates depends upon the cost of milk to the school or institution and the proposed selling price to children.

3. The program is administered within the States by the State Agencies to the greatest extent possible. Funds for reimbursement payments are advanced to State Agencies in amounts consistent with anticipated program needs. AMS administers program directly for private schools and other outlets where State educational agency is prohibited by law from disbursing funds to such participants.
4. No Federal funds are used by the State Agencies for administering this program in the States. The total Federal costs, i.e., the cash reimbursements and the Federal Government's administrative expenses, are limited each fiscal year to the amounts authorized in the law. The costs of Federal administration are charged to an allocation from the administrative expense limitation of the Commodity Credit Corporation.

Selected examples of recent progress

From 1958 to 1959 the number of participating schools and institutions increased from 76,478 to over 81,500. Of the latter figure there were 78,216 schools and 3,349 child-care institutions and summer camps. The number of one-half pints of milk reimbursed increased from over 1.9 billion in 1958 to almost 2.2 billion in 1959. During this same period, expenditures rose from \$66.3 million to \$74.5 million.

Special Milk Program
Number of Half-pints of Milk Reimbursed

	FISCAL YEAR	
	1958	1959
	(Thousands)	
July	16,838	22,175
August	11,603	20,994
September	188,175	222,680
October	233,438	278,422
November	192,492	214,913
December	161,583	188,832
January	221,194	234,901
February	203,640	228,620
March	226,406	224,768
April	201,862	244,839
May	201,630	224,844
June	59,309	70,092
Total	1,918,170	2,176,098

Tables I and II which follow report by State the number of outlets participating, number of half-pints reimbursed and obligations for 1958 and 1959.

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Special Milk Program

TABLE I

Report of Special Milk Program Operations - Fiscal Years 1958 and 1959

State	Number of Outlets		Est. No of Half-Pints	
	Participating		of Milk Reimbursed (Mil.)	
	1958	1959	1958	1959
Alabama	1,442	1,523	30.0	33.3
Alaska	26	33	.4	.6
Arizona	417	511	11.1	13.4
Arkansas	1,051	1,070	16.1	17.2
California	5,073	5,692	197.0	231.9
Colorado	879	979	15.9	17.6
Connecticut	692	779	20.9	26.2
Delaware	126	165	5.0	6.0
District of Columbia ..	186	193	11.9	13.3
Florida	1,210	1,368	34.8	41.2
Georgia	1,559	1,640	25.3	28.0
Hawaii	178	192	4.7	4.9
Idaho	431	429	4.8	5.4
Illinois	4,211	4,480	143.0	158.0
Indiana	1,666	1,897	42.4	49.0
Iowa	2,114	2,239	40.5	43.8
Kansas	1,128	1,226	21.3	23.8
Kentucky.....	1,423	1,569	28.8	33.8
Louisiana	945	1,009	11.1	12.5
Maine	819	845	9.0	9.6
Maryland	1,004	1,070	34.2	44.3
Massachusetts	2,369	2,635	78.7	87.3
Michigan	4,342	4,539	115.3	128.1
Minnesota	2,541	2,691	51.7	58.0
Mississippi	1,041	1,078	22.6	26.8
Missouri	2,921	2,995	48.9	54.1
Montana	343	357	4.0	4.1
Nebraska	679	729	11.6	12.7
Nevada	114	139	2.1	2.7
New Hampshire	348	367	5.3	6.0
New Jersey	1,404	1,597	47.0	59.1
New Mexico	544	587	18.5	22.6
New York	4,565	4,859	214.1	232.6
North Carolina	2,009	2,101	32.8	38.3
North Dakota	391	431	5.8	7.5
Ohio	3,446	3,803	124.6	139.9
Oklahoma	1,155	1,203	23.1	25.8
Oregon	799	866	13.0	14.6
Pennsylvania	4,741	5,047	96.4	109.4
Rhode Island	297	305	8.5	9.5
South Carolina	1,042	1,096	14.2	17.1
South Dakota	472	555	10.4	12.1
Tennessee	2,217	2,303	44.1	50.2
Texas	3,256	2,923	55.3	64.1
Utah	323	337	4.6	5.1
Vermont	381	409	3.9	4.2
Virginia	1,419	1,496	35.8	41.8
Washington	1,174	1,361	29.2	32.9
West Virginia	992	1,041	10.4	11.2
Wisconsin	4,385	4,584	74.6	80.7
Wyoming	188	222	3.5	3.8
Total	76,478	81,565	1,918.2	2,176.1

Special Milk Program
Obligations - Fiscal Years 1958 and 1959

State	1958	1959
Alabama	\$1,010,692	\$1,108,771
Alaska	15,886	18,848
Arizona	372,324	450,627
Arkansas	615,356	664,901
California	6,258,485	7,327,109
Colorado	540,773	590,064
Connecticut	690,042	857,954
Delaware	185,950	203,602
Dist. of Columbia	341,644	371,335
Florida	1,087,283	1,290,930
Georgia	905,591	984,134
Hawaii	173,618	174,044
Idaho	167,090	185,695
Illionis	5,088,050	5,550,699
Indiana	1,533,596	1,740,117
Iowa	1,472,374	1,602,298
Kansas	719,153	811,925
Kentucky	1,083,409	1,245,637
Louisiana	445,832	463,837
Maine	295,266	318,126
Maryland	1,234,695	1,507,192
Massachusetts	2,547,168	2,813,942
Michigan	3,902,016	4,371,462
Minnesota	1,870,384	2,104,607
Mississippi	857,391	1,019,758
Missouri	1,832,883	2,001,735
Montana	144,688	142,741
Nebraska	403,516	444,714
Nevada	61,254	74,569
New Hampshire	184,383	211,035
New Jersey	1,620,085	1,958,825
New Mexico	594,779	608,631
New York	8,086,705	8,641,335
North Carolina	1,146,248	1,321,427
North Dakota	215,849	259,812
Ohio	4,063,866	4,553,071
Oklahoma	735,764	845,127
Oregon	424,224	480,348
Pennsylvania	3,051,546	3,511,214
Rhode Island	274,680	312,111
South Carolina	479,386	589,125
South Dakota	340,208	382,974
Tennessee	1,509,072	1,663,602
Texas	2,075,458	2,353,131
Utah	171,579	187,861
Vermont	135,779	148,801
Virginia	1,251,851	1,474,062
Washington	1,100,939	1,225,690
West Virginia	375,100	398,786
Wisconsin	2,508,053	2,744,620
Wyoming	131,050	142,194
Total	66,333,013	74,455,155

(d) Perishable Agricultural Commodities Act Fund

Appropriation Act, 1960 and base for 1961 (from receipts)	\$670,000
Budget Estimate, 1961 (from receipts)	<u>670,000</u>

NOTE: A total of \$978,733 is estimated to be available for obligation in fiscal year 1961, including an unobligated balance of \$308,733 to be carried forward from 1960. Of this total, the estimates tentatively forecast obligations of \$775,300 for fiscal year 1961, leaving a carryover of \$203,433 into fiscal year 1962.

PROJECT STATEMENT
(On basis of available funds)

Project	1959	1960 (estimated)	Increase or Decrease	1961 (estimated)
Licensing dealers and handling complaints a/....	\$679,872	\$749,300	+\$26,000(1)	\$775,300
Unobligated balance brought forward	-394,627	-388,033	+79,300	-308,733
Unobligated balance carried forward	308,033	308,733	-105,300	+203,433
Total employee health bene- fit costs (P.L. 36-382) ..	[- -]	[- -]	[+6,600]	[6,600]
Total appropriation or estimate	673,278	670,000	- -	670,000

a/ Represents obligations. Applied costs for 1959 are \$679,340. The difference of \$532 reflects, primarily, the excess of printing and reproduction ordered in 1959 over that used.

INCREASE

(1) An increase in obligations of \$26,000 to meet the increasing workload requirements for carrying out the Perishable Agricultural Commodities Act, as amended.

Need for Increase: Accelerated changes in the marketing structure for fruits and vegetables has resulted in the industry's focusing more attention on PACA operations than it has in the past 20 years. There has been a marked increase in the number of consolidations and mergers at both buying and selling levels. This has placed an increased burden on small dealers. There have been more business failures which in turn have increased the number of complaints filed and a consequent increase in workload under the PAC Act.

The program of spot-checking produce to combat the problem of shipment and sale of misbranded produce was extended to some of the larger terminal markets during 1959. While this program was expanded, coverage has not been adequate because of the lack of trained investigators. The changing economic conditions in the industry have resulted in an increase in the number of complaints filed. Despite increased emphasis on and

additional facilities available for handling these cases, the backlog on June 30, 1959 was 750 compared with 692 on June 30, 1957 immediately prior to the passage of the most recent amendment to the Act which increased the Department's responsibilities. Additional technical employees are needed to obtain more extensive coverage in complaint, licensing and misbranding work and eventually to fill vacancies resulting from retirement of senior technical employees. At present six employees assigned to this activity are eligible for retirement.

Plan of Work:

To handle regular complaint work which has been increasing and which comprises a large part of the workload under the Act, additional technical and clerical personnel would be added to the staff. The program for checking the branding as to grade and State of origin of major fruits and vegetables at shipping and terminal markets would be stepped up. Most of the technical employees will be in almost constant travel status in order to check on as many as possible of the thousands of packers and repackers scattered through the country who are subject to the Act.

STATUS OF PROGRAM

Current Activities:

This special fund, comprised principally of annual license fees, is used for the administration of the Perishable Agricultural Commodities, Produce Agency, and Export Apple and Pear Acts. These laws are designed to (1) protect producers, distributors, consumers and others from unfair and fraudulent practices in the marketing of perishable agricultural commodities; (2) prevent the unwarranted destruction or dumping of farm products handled for and on behalf of others; and (3) promote foreign trade in apples and pears.

All commission merchants, dealers and brokers who handle fresh or frozen fruits and vegetables in interstate and foreign commerce must be licensed under the Perishable Agricultural Commodities Act. Handlers are required to give shippers a true and correct accounting for commodities sent for sale in the market. Buyers and sellers must live up to the terms of their contracts. False or misleading statements, misbranding, etc. are prohibited.

Any interested party or agency may request the assistance of the Department in settling disputes under the law. The Department will promptly communicate with the respondent party; make necessary investigation; endeavor to bring about an amicable informal settlement; take formal action, if necessary; give each party an opportunity to present his side fully; determine the loss or amount of damage to be paid; and issue a formal order calling for reparation. If violations are repeated or flagrant, disciplinary action may be taken by the Department seeking to suspend or revoke the offender's license. The majority of cases involve questions of quality and condition. Evidence consists principally of inspection certificates and other pertinent documents furnished by complainants and respondents.

Activities under these acts include licensing, collecting fees, investigating and handling complaints and violations and working with growers and shippers to correct and prevent misbranding of produce thereby reducing the number of potential complaints.

Financing:

License Fees:

Annual license fees of \$25, together with arrearage fees, and appropriations, if any, for this work are deposited into a special fund. With the exception of legal services (which are provided from the appropriation to the Office of the General Counsel), all expenses for administration of the Perishable Agricultural Commodities, Produce Agency, and Export Apple and Pear Acts are paid from this fund.

Revenue and Obligations:

Item	Revenue Collected and Obligations Incurred				
	1957	1958	1959	1960 (Est.)	1961 (Est.)
Fees and arrearages collected.....	\$532,690	\$674,978	\$673,278	\$670,000	\$670,000
Appropriation for retirement costs (Transferred from "Marketing Services").....		25,400	25,400	25,400	25,400
Balance from prior years used.....			6,594	79,300	105,300
Obligations.....	525,353	617,489	705,272	774,700	800,700

Selected Examples of Recent Progress and Trends

1. Perishable Agricultural Commodities Act

- a. Enforcement Program Strengthened: The program of spot checking produce to combat the problem of shipment and sale of misbranded produce was expanded during 1959 and, for the first time, coverage was provided for many of the larger terminal markets. The industry, in general, has accepted this program and many favorable comments have been received.

Investigations were conducted in 29 States and the District of Columbia in connection with shipping point activities. During the past year investigators visited 1447 firms in approximately 170 cities and contacted 2159 industry members. There were 114 repacking establishments checked and 59 firms, where previous violations had been found, were rechecked. A total of 1,612 spot-check inspections were made and many more lots of produce were examined for size, grade and State of origin markings. Certificates were issued on 209 violations and an additional 25 were corrected at shipping points in the presence of the investigator.

- b. Marketing Clinics Conducted: Meetings between the Department and produce industry representatives were held in Arizona, California, Florida and Idaho. These clinics afford opportunity to representatives of the Department to confer with representatives of the industry, and inform and advise them in connection with their problems in the marketing of produce.

- c. Meeting Held with Industry Groups: The program to increase understanding and cooperation between industry and the Department was expanded. Leading members of the industry were invited to a second conference, held in Dallas, Texas January 30 and 31, 1959 to discuss administration of the Act. Consideration was given to a number of problems facing the industry.

One of the problems discussed was that of apparently unjustified rejections. The industry group was greatly concerned over power exerted on various markets by large buying organizations. In considering this matter it was decided that large buyers may not be entirely at fault as some sellers have fallen into the habit of shipping produce without a firm contractual understanding. It was decided that further study be given to this problem.

Considerable time was devoted to discussion of requirements of the Act insofar as they relate to relicensing and employment of individuals whose licenses have been revoked or suspended.

Attention was also devoted to the increasing practice of stopping cars for inspection enroute to their ultimate destinations. It was agreed that such stoppage enroute without prior consent of the seller should constitute acceptance of the shipment by the buyer, but would not bar recovery of damages for a breach of contract by the shipper.

Agreement was reached on several points of discussion and, if adopted, would require amendments to the Act.

- d. Number of Licenses Remains Nearly Constant: There was a slight decrease in the number of licenses in effect during the year. As of June 30, 1959, there were 24,955 licenses in effect compared with 25,032 a year earlier.

Licensing activity and number of licenses in effect at the end of the past 3 years and estimated for 1960 and 1961 are as follows:

Activity	Fiscal Year				
	1957	1958	1959	1960 (Est.)	1961 (Est.)
Licenses renewed....	20,242	19,727	19,806	19,955	19,955
New licenses issued..	5,745	5,305	5,149	5,000	5,000
Licenses terminated..	6,596	6,260	5,226	5,000	5,000
Total actions.....	32,583	31,292	30,181	29,955	29,955
In effect June 30....	25,987	25,032	24,955	24,955	24,955

- e. Complaints Increase and Reparations Decrease: The 3,063 cases handled in 1959 included 685 from fiscal year 1958 and 58 reopened during 1959. A total of 2,313 of these cases were settled during 1959, leaving 750 cases to be handled during 1960. Approximately 8,000 additional inquiries were answered. These were received from shippers and dealers seeking advice. The assistance rendered has aided in settling thousands of disputes which were never recorded as formal complaints.

The decrease in reparation awards over fiscal year 1958 is due, principally, to the changing economic conditions in the produce industry. It has become increasingly more difficult to effect amicable settlements of reparation awards.

f. Analysis of Complaint Work and Reparations Awarded:

Item	Fiscal Year				
	1957	1958	1959	1960(Est.)	1961(Est.)
Complaints:					
On hand, July 1.....	692:	737:	685:	750:	710
Received or reopened..	1,962:	1,951:	2,378:	2,460:	2,560
Total to be handled..	2,654:	2,688:	3,063:	3,210:	3,270
Formal decisions.....	223:	296:	302:	320:	325
Informal amicable settlements.....	880:	921:	951:	1,060:	1,100
Otherwise closed.....	814:	786:	1,060:	1,120:	1,150
Pending June 30.....	737:	685:	750:	710:	695
Reparations:					
Awarded-Formal orders..	\$234,298:	\$592,662:	\$440,389:	\$450,000:	\$460,000
Payments-Amicable settlements.....	1,212,993:	993,837:	856,172:	1,000,000:	1,025,000
Total.....	1,447,291:	1,586,499:	1,296,561:	1,450,000:	1,485,000

g. Basis for settlements: Most settlements are made on the basis of precedents established by Secretary's Orders in previous cases handled. These decisions, published and made available to members of the produce industry, are used by them as the basis for settling disputes informally. Cases referred to the Department are, in general, those which are difficult and which the interested parties are unable to settle among themselves. In fiscal year 1959 there were 302 formal decisions compared with 296 the previous year.

h. Investigations Made and Settlements Reached: Of the 3,063 cases handled in 1959, personal investigations were conducted on 989 compared with 712 the previous year. Of the total, 2,313 were closed including 41 cases submitted to arbitration. This was an increase of 34 over the previous year. Settlement was effected on the basis of the Department's determinations. There was an increase in 1959 of 310 in the number of complaints closed.

There were 350 disciplinary complaints filed during the year, including 274 on misbranding compared with 70 misbranding complaints during 1958. The increase in misbranding complaints resulted from concentration at terminal markets of the spot-checking program. All misbranding cases but one were closed on the basis of warnings and assurance by the offenders that similar violations would not recur. The one case involved 12 lots of misbranded potatoes wilfully shipped in interstate commerce without correcting the misbranding. When the violation was called to the shipper's attention he refused to cooperate in any manner and his license was suspended for 90 days.

The remaining 76 disciplinary complaints involved questioning the applicant's fitness to hold a license, failure of licensees to maintain adequate records or render accurate accountings, operating without a valid license, or other violations.

2. Produce Agency Act Cases Handled: There were 38 new cases filed compared with 36 in the preceding year. Cases carried over numbered 32, making a total of 70 cases handled during 1959. There were 57 cases closed compared with 32 during 1958. Of the closed cases, 24 were by amicable settlement and the remaining 33 because of insufficient evidence, lack of jurisdiction, or withdrawn by complainants. There were 13 cases pending at the close of the fiscal year.

Cut flowers was the product involved in most complaint cases. At the close of the fiscal year three of the pending cases were in the General Counsel's office awaiting further disposition and 2 cases were pending with U. S. attorneys.

3. Export Apple and Pear Act: Plans were formulated during fiscal year 1959 to amend the regulations under this Act. Suggestions were received from the industry and a notice of proposed rule-making was circulated in March 1959. The proposals are expected to improve the marketing of apples and pears in export as well as aid in the enforcement of the Act. No complaints were filed under this Act during fiscal year 1959.

(e) Removal of Surplus Agricultural Commodities
(Section 32)

Appropriation Act, 1960	\$251,446,365
Transferred to:	
Department of the Interior to "Promote and develop fishery products and research pertaining to American fisheries, Fish and Wildlife Service", pursuant to P.L. 1024, 84th Congress	-4,993,642
School Lunch Program, pursuant to 1960 Appropriation Act	-43,657,248
Salaries and Expenses, Foreign Agricultural Service	-2,493,000
Base for 1961	<u>200,302,475</u>
Budget Estimate, 1961:	
Annual permanent appropriation	\$318,000,000
Less transfers to:	
Department of the Interior, pursuant to	
P.L. 1024, 84th Congress	-4,800,000
School Lunch Program	-40,000,000
Salaries and expenses, Foreign Agricultural	
Service	<u>-2,539,000</u> a/ <u>270,661,000</u>
Increase (in annual permanent appropriation for	
Section 32 purposes)	<u>+70,358,525</u>

a/ In addition, an unobligated balance of \$300,000,000 carried forward from 1960 will be available. Of the total of \$570,661,000, the 1961 estimates forecast obligations of \$110,000,000. This would result in an unobligated balance of \$460,661,000 of which \$300,000,000 would carry forward into fiscal 1962 and \$160,661,000 would revert to the U. S. Treasury.

PROJECT STATEMENT
(On basis of available funds)

Project	1959	1960 (estimated)	Increase or Decrease	1961 (estimated)
1. <u>Commodity program</u>				
<u>payments:</u>				
a. Direct purchases ...	\$108,927,240	\$105,503,400	- -	\$105,503,400
b. Diversion payments .	8,359,127			
2. <u>Surplus removal operating expenses</u>	2,383,818	2,646,600	- -	2,646,600
3. <u>Marketing agreements and orders</u>	1,754,069	1,850,000	- -	1,850,000
Total obligations a/ ...	<u>121,424,254</u>	<u>110,000,000</u>	- -	<u>110,000,000</u>
Unobligated balance no longer available	72,837,054	90,302,475	+\$70,358,525	160,661,000
Unobligated balance carried forward	300,000,000	300,000,000	- -	300,000,000
Total employee health benefits costs (P.L. 86-382)	[- -]	[- -]	[+31,140]	[31,140]
Total available	<u>494,261,308</u>	<u>500,302,475</u>	<u>+70,358,525</u>	<u>570,661,000</u>
Recovery of prior year obligations	-531,594	- -	- -	- -
Unobligated balance brought forward	-300,000,000	-300,000,000	- -	-300,000,000
Subtotal	<u>193,729,714</u>	<u>200,302,475</u>	<u>+70,358,525</u>	<u>270,661,000</u>

(Continued on next page)

Project	1959	1960 (estimated)	Increase or Decrease	1961 (estimated)
Transferred to:				
Department of the Interior pursuant to P.L. 1024, 84th Congress	4,786,415	4,993,642	-193,642	4,800,000
School Lunch Program	35,000,000	43,657,248	-3,657,248	40,000,000
Salaries and expenses, Foreign Agricultural Service	- -	2,493,000	+46,000	2,539,000
Transfer in 1960 esti- mates to Foreign Agricultural Service	2,420,534	- -	- -	- -
Total appropriation or estimate	235,936,663	251,446,365	+66,553,635	318,000,000

a/ Applied costs for 1959 are \$137,564,112. The difference of \$16,139,858 reflects, primarily, the excess of commodities delivered and distributed to eligible recipients over commodities purchased in that year.

EXPLANATION

The estimates for 1961 are projected at the 1960 level, and provide for the removal of surpluses now foreseen. If unexpected surpluses develop, however, steps would be taken to use additional funds for their removal as conditions might warrant.

Section 32 funds are used to stabilize market prices either through announcements that the Department stands ready to enter the market or by actual participation in the market. The extent to which funds actually will be obligated and expended will depend upon the effectiveness of an announcement on market prices. The type of program to be developed will depend upon the kind and volume of the surpluses which exist at the time. Generally, surpluses are removed from the market through purchases, which are then donated to schools, institutions and needy persons, with schools getting first priority.

Fund Availability and Balance

The following table summarizes the estimated total funds available for Section 32 activities and the estimated balance carried forward for fiscal years 1959, 1960 and 1961.

Item	1959	1960 (estimated)	1961 (estimated)
Balance from prior year	\$300,000,000	\$300,000,000	\$300,000,000
Recovery of prior year obligations	531,594	- -	- -
Appropriation or estimate	235,936,663	251,446,365	318,000,000
Transfer to:			
Interior Department	-4,786,415	-4,993,642	-4,800,000
School Lunch Program	-35,000,000	-43,657,248	-40,000,000
Salaries, and Expenses, Foreign			
Agricultural Service	- -	-2,493,000	-2,539,000
Transfer in 1960 estimates to			
Foreign Agricultural Service	-2,420,534	- -	- -
Total	494,261,308	500,302,475	570,661,000
Obligations	-121,424,254	-110,000,000	-110,000,000
Unobligated balance no longer avail-			
able	-72,837,054	-90,302,475	-160,661,000
Unobligated balance carried forward			
to subsequent years	300,000,000	300,000,000	300,000,000



STATUS OF PROGRAM

Current Activities

Under Section 32 of the Act of August 24, 1935, as amended (7 USC 612c), an amount equal to 30 percent of customs receipts during each calendar year and unused balances up to \$300 million are available for encouraging the exportation and domestic consumption of agricultural commodities. Current activities for removing from the market surplus agricultural commodities include:

- (a) Purchases for distribution through State distributing agencies to school lunch programs, and to welfare agencies and institutions eligible to receive such purchases.
- (b) Encouragement of exports through payments which will permit the sale of surplus commodities in foreign markets.
- (c) Encouragement of domestic consumption by diversion from normal channels of trade to by-products and new uses.

The basic authority also provides that these funds shall be devoted principally to perishable nonbasic agricultural commodities and their products, other than those receiving price support under Title II of the Agricultural Act of 1949, as amended. These commodities are: tung nuts, honey, milk, butterfat, and the products of milk and butterfat. It has been determined that this provision can be legally satisfied by setting aside or reserving the principal portion of Section 32 funds for the use of perishable nonbasic agricultural commodities when the occasion arises warranting their use for such purpose. Not to exceed 25 percent of funds available under the Act may be used for any one commodity or product thereof.

Section 32 funds are also used by the Agricultural Marketing Service for:

- (a) Surplus removal operating expenses which include administrative costs for direct removal of surpluses from the market, and distribution by the Agricultural Marketing Service of Section 32 and CCC commodities to eligible outlets. These funds are also used to encourage food preservation and marketing of abundant foods through the food trades.
- (b) The administration of marketing agreements and orders which aim to establish and maintain orderly marketing conditions for certain commodities and their products.

Selected Examples of Recent Progress and Trends:

A. Purchase of agricultural commodities for distribution to authorized domestic agencies

1. During the fiscal year 1959, approximately 274.1 million pounds of agricultural commodities at a cost of approximately

\$108.9 million were purchased for distribution through authorized agencies. Distribution was made by 76 agencies to an increased number of participants as compared with 1958.

	1958	1959
(1) School children	13,640,502	14,106,848
(2) Persons in eligible institutions	1,388,003	1,392,428
(3) Individual welfare recipients (peak month).	4,665,479	5,741,298

2. Commodities Purchased during Fiscal Years 1958 and 1959 for Distribution Through Authorized Agencies

Commodity	1958		1959	
	Pounds	Value	Pounds	Value
Beans	- -	\$ 392 ^{1/}	- -	\$ - -
Cabbage	- -	- -	4,447,600	123,298
Dairy Products:				
Butter	102,503,511	63,050,491	99,153,600	60,934,980
Cheese	87,911,413	34,380,318	68,610,000	24,772,687
Milk	133,697,199	24,225,684	88,884,000	15,480,248
Eggs, dried	- -	1/ 104,875	5,406,600	6,081,805
Eggs, frozen	- -	- -	1,380,000	335,277
Grapefruit, canned.	6,458,700	868,053	- -	- -
Olive Oil	- -	- -	326,040	116,841
Peanut butter	5,075,369	868,402	5,900,126	1,082,104
GAO settlements ...	- -	-101,220	- -	- -
Total	335,646,192	123,396,995	274,107,966	108,927,240

B. Quantities of Commodities Diverted and Payments Made During Fiscal Years 1958 and 1959

Commodity	Unit	1958		1959	
		Quantity	Payment	Quantity	Payment
Dates	lb.	8,691,702	\$ 260,631	5,165,036	\$ 129,126
Potatoes	cwt.	5,355,607	2,421,962	23,456,287	7,470,001
Walnuts	lb.	- -	- -	2,000,000	760,000
Total		xxx	2,682,593	xxx	8,359,127

^{1/} Transportation on prior year purchases.

C. Surplus Removal Operating Expenses

1. Planning surplus removal programs and distributing Commodities

In addition to planning surplus removal programs under section 32, AMS distributes surplus food commodities (section 32 and section 416-CCC) to eligible domestic outlets and (section 416-CCC) to eligible foreign agencies.

a. Domestic Donations - Commodities are shipped at the request of the State agencies, with the Federal Government paying all costs to central State receiving points. These costs may include processing and packaging as well as transportation. The State agencies accept the commodities at the central receiving points and make distribution to the final users. State agencies approve eligible recipients according to USDA standards. For example, to participate in the program, school lunch programs must be operated on a nonprofit basis, institutions and hospitals must be nonprofit and exempt from Federal income tax, and persons in family units receiving commodities must be certified as needy by a public welfare agency. State agencies are responsible for overall supervision of the program to insure that the commodities are effectively used and that waste or resale is avoided.

A record total of nearly 3 billion pounds of surplus foods was donated by the U.S. Department of Agriculture during fiscal year 1959, for use in school lunch programs and by charitable institutions in this country and by needy persons both here and abroad. Distribution totaled 2,979,600,000 pounds, an increase of 5% over the previous fiscal year, and marked a record high volume for donations of Government-owned foods.

Domestic outlets received all of the increase, with donations to schools, institutions, and needy persons totaling slightly more than 1 billion pounds for the year, compared with 871,600,000 pounds the previous year. Greater amounts of wheat flour, corn meal, rice, nonfat dry milk and butter to needy persons in family units accounted for most of the gain.

During the 1959 fiscal year, approximately 250 million pounds of food donated through the direct distribution program benefited some 14 million school children taking part in school lunch programs. and 1,400,000 persons in charitable institutions in this country received a total of 156 million pounds. Domestic distribution to needy persons during the year totaled over 706-3/4 million pounds, an increase of 50% from 471-1/2 million pounds in fiscal 1958. Participation varies from month to month, and ranged from a high of 5-3/4 million persons to a low of 4-3/4 million.

b. Foreign Donations - CCC Commodities (section 416) are processed and packaged as necessary and shipped to U. S. voluntary agencies who accept title to the commodities at a U. S. port for delivery to needy persons in foreign countries. In most cases, agencies are reimbursed for ocean freight charges. The voluntary agencies are responsible for overall supervision of the program to insure that the commodities will not be sold or exchanged and will be distributed to needy persons without regard to race, creed, or color.

Section 416 surplus foods are donated for overseas relief only after sufficient stocks have been made available to meet the needs of eligible recipients in this country. Donations for foreign distribution amounted to 1,867,200,000 pounds in fiscal year 1959, a decline of about 100 million pounds from 1958. Increased donations of wheat flour were offset by decreased amounts of cheese, which was removed from the foreign donation list in July 1958, to reserve the declining Government-owned stocks for domestic outlets.

The work performed by AMS in connection with this program has been integrated with the direct distribution activities which are concerned primarily with domestic outlets. Further, the costs are included within the amount spent for the total distribution program. To the extent savings in this fund result from the financing of this part of the work in the Section 416 foreign donation program activities to be financed from the CCC administrative expense limitation as proposed in 1961 Budget, such amounts will be used for the strengthening of the administration of the domestic distribution program, particularly, supervision and audit of welfare operations.

Quantity of Surplus Food Distribution for Domestic and Foreign Use
 Fiscal Years 1958 and 1959
 (Million Pounds)

Program and Commodity:	Domestic Distribution				Foreign Distribution				Total Distribution	
	Schools	Institutions	Welfare	Total	1958	1959	1958	1959	1958	1959
Section 32:	1958	1959	1958	1959	1958	1959	1958	1959	1958	1959
Butter	67.3	49.7	28.4	20.9	12.6	41.6	108.3	112.2	108.3	112.2
Cheese	24.9	26.5	10.9	6.1	52.1	36.7	87.9	69.3	87.9	69.3
Eggs, shell and dried:	4.6	.1	-	.2	-	1.0	4.6	1.3	4.6	1.3
Fruits, deciduous...	6.5	-	-	-	-	-	6.5	-	6.5	-
Milk	18.9	17.8	13.1	12.3	78.3	93.7	110.3	123.8	110.3	123.8
Peanut butter	4.9	6.0	-	-	-	-	4.9	6.0	4.9	6.0
Vegetables	-	3.4	-	1.0	-	-	-	4.4	-	4.4
Total Section 32	127.1	103.5	52.4	40.5	143.0	173.0	322.5	317.0	322.5	317.0
Section 416:	1958	1959	1958	1959	1958	1959	1958	1959	1958	1959
Beans	17.9	4.5	.3	.1	1.0	-	19.2	4.6	19.2	4.6
Butter	1.5	14.9	.7	6.2	.3	12.4	2.5	33.5	2.5	33.5
Cheese	8.0	10.2	3.5	2.4	16.8	14.4	28.3	27.0	221.7	65.7
Cornmeal	16.6	15.0	8.6	9.3	96.1	142.2	121.3	166.5	419.5	442.9
Corn	-	-	-	-	-	-	62.5	40.2	62.5	40.2
Flour	58.7	75.0	72.6	81.0	149.0	250.0	280.3	406.0	1,050.0	1,268.8
Milk	2.2	6.6	1.5	4.4	9.0	34.0	12.7	45.0	562.4	599.3
Rice	19.7	20.0	8.7	12.0	56.3	80.8	84.7	112.8	144.3	166.9
Wheat	-	-	-	-	-	-	39.9	40.7	39.9	40.7
Total, Section 416	124.6	146.2	95.9	115.4	328.5	533.8	549.0	795.4	1,867.2	2,522.0
Grand Total	251.7	249.7	148.3	155.9	471.5	706.8	871.5	1,112.4	2,844.5	2,979.6

Note: It is estimated that approximately 2,776.9 million pounds may be distributed during the 1960 fiscal year.

Cost of Surplus Food Distribution for Domestic and Foreign Use
Under Sections 32 and 416
Fiscal Years 1958 and 1959
(Million Dollars)

Program and Commodity	Domestic Distribution			Foreign			Total	
	Schools	Institutions	Welfare	Distribution	Distribution	Distribution	1958	1959
Section 32:	1958	1959	1958	1959	1958	1959	1958	1959
Butter	41.6	30.4	17.5	12.8	7.8	25.4	66.9	68.6
Cheese	9.8	9.4	4.3	2.2	20.6	13.1	34.7	24.7
Eggs, shell and dried.	5.2	.1	-	.2	-	1.1	5.2	1.4
Fruit, deciduous	.9	-	-	-	-	-	-	.9
Milk	3.4	3.2	2.4	2.2	14.1	16.6	19.9	22.0
Peanut butter	.9	1.2	-	-	-	-	-	.9
Vegetables	-	.1	-	1/	-	-	-	.1
Total, Section 32..	61.8	44.4	24.2	17.4	42.5	56.2	128.5	118.0

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Program and Commodity	Domestic Distribution			Foreign			Total	
	Schools	Institutions	Welfare	Distribution	Distribution	Distribution	1958	1959
Section 416:	1958	1959	1958	1959	1958	1959	1958	1959
Beans	1.6	.4	1/	-	.1	-	-	.4
Butter	1.0	9.2	.4	3.9	.2	7.7	1.6	20.8
Cheese	3.3	4.0	1.5	.9	6.9	5.5	11.7	10.4
Cornmeal	1.1	.7	.6	.5	6.5	6.8	8.2	8.0
Corn	-	-	-	-	-	-	-	-
Flour	4.6	4.7	5.6	5.0	11.6	15.6	21.8	25.3
Milk	.4	1.1	.3	.7	1.7	5.8	2.4	7.6
Rice	2.2	2.3	1.0	1.4	6.4	9.4	9.6	13.1
Wheat	-	-	-	-	-	-	-	-
Total, Section 416.	14.2	22.4	9.4	12.4	33.4	50.8	57.0	85.6
Grand Total	76.0	66.8	33.6	29.8	75.9	107.0	185.5	203.6

Note: It is estimated that commodities approximating \$302.9 may be distributed during the 1960 fiscal year.

1/ Less than \$50,000

2. Food Trades Program. Under this program the consumption of plentiful foods is encouraged through normal channels of trade by enlisting the cooperation of food distributors in obtaining merchandising emphasis on foods available in plentiful supply and by supporting industry food promotion and merchandising campaigns. The workload under this activity is shown in the following table:

Project	: F.Y. 1959 : Number	: F.Y. 1960 : Number (Est.)
Average number of foods listed on monthly abundant foods list	: 10	: 10
Distribution of monthly plentiful foods list - Distributors	: 24,200	: 25,000
Distribution of monthly plentiful foods list - Food Service	: 22,150	: 25,000
National food drives conducted	: 10	: 10
Area, State and local food drives conducted	: 18	: 15

Special food drives were conducted during the past year on apples, dairy products, canned green peas, fresh peaches, fresh corn, eggs, cheese and potatoes. The August Sandwich Month, to stimulate consumption of grain supplies was fully supported. The outstanding effort was on eggs, starting with March Egg Month and continuing into July. Industry reaction to all of these drives was favorable. Major food drives in 1960 may be conducted on almonds, apples, cheese, chickens, dairy products, eggs, honey and pork.

E. Marketing Agreements and Orders

1. Activities under the Milk, Fruit and Vegetable Agreement and Order Programs During Fiscal Year 1959 and Estimated for 1960:

Activity	Dairy		F & V	
	1959	1960	1959	1960
Agreement and order programs in effect ..	78	85	37	38
Hearings held to consider amendments to existing orders or the issuance of orders in new areas	36	54	2	11
Requests received for new programs	14	10	1	3
Amendments issued to existing orders	39	50	6	8
Suspensions issued to existing orders ...	19	21	2	-
Petitions received for review of various order provisions	15	18	2	2
Petitions disposed of during the year ...	15	20	2	2
Court cases disposed of during the year..	26	30	42	45
Hearings held under Administrative Procedures Act	15	17	1	-
Applications reviewed from cooperatives for qualifications to participate under the Act	75	100	-	-
Cases disposed of under the Act	137	123	-	-
Regulatory orders issued under provisions of marketing order	-	-	347	367
Appointment of administrative or control committees	-	-	42	44
Promulgation of committee rule making ...	-	-	22	22
Budgets approved	76	85	37	35
Investigation of alleged violations	37	41	245	255
Cases referred to Dept. of Justice for prosecution	33	37	45	45
Administrators Decisions issued	38	50	6	10
Secretary's Decisions issued	48	50	6	10
Secretary's Referendum Orders issued	23	25	10	12
	:	:	:	:

2. Marketing Agreement and Order Programs in Effect for Fluid Milk During Fiscal Year 1959

Orders	: Number : of : Producers:	: Producer : Milk :(1,000 lbs):	States of Origin
<u>NEW ENGLAND:</u>			
Boston	10,200	1,770,585	Maine, Mass., N.H., N.Y., Vt.
Connecticut	3,296	264,086	Conn., Maine, Mass., N.H., N.Y., R.I., Vt.
Fall River	304	42,944	Mass., N.H., R. I., Vt.
Merrimack Valley	882	136,817	Maine, Mass., N.H., Vt.
Southeastern New England	2,230	304,903	Conn., Maine, Mass., N.H., N.Y. R.I. Vt.
Springfield	1,081	220,569	Conn., Mass., N.H., N.Y., Vt.
Worcester	722	150,831	Mass., N.H., N.Y., Vt.
<u>MIDDLE ATLANTIC:</u>			
Philadelphia	7,654	1,524,246	Del., Maryland, N.J., Penn.
New York-New Jersey	50,877	9,985,912	Conn., N.J., N.Y., Pa., Vt., Md., Del.
<u>SOUTH ATLANTIC:</u>			
Appalachian	731	141,179	Ky., N.C., Tenn., Va.
Bluefield	279	51,921	Ky., Va., W.Va.
Clarksburg	518	70,103	Md., Pa., W.Va.
Southeastern Florida ...	98	410,087	Fla.
Tri-State Area	1,855	230,101	Ky., Ohio., W.Va.
Wheeling	1,272	155,808	Ohio, Pa., W.Va.
Wilmington	413	94,916	Del., Md., Pa.
<u>EAST NORTH CENTRAL:</u>			
<u>Eastern Group</u>			
Akron-Stark County	2,232	382,703	Ohio
Cincinnati	3,777	457,973	Ind., Ky., Ohio
Cleveland	7,472	1,175,680	Ind., Mich., Ohio, Pa.
Columbus	1,744	301,409	Ohio
Dayton-Springfield	2,077	364,755	Ind., Ohio.
Detroit	11,321	2,032,737	Michigan
Muskegon	492	103,806	Michigan
No. Central Ohio	1,229	208,878	Ind., Ohio
Toledo	1,421	289,094	Ind., Mich., Ohio
Upstate Michigan	592	113,014	Michigan
<u>Western Group</u>			
Chicago	20,088	5,351,237	Ill., Ind., Mich., Wis.
Fort Wayne	851	107,815	Ind., Ohio, Mich.
Mich. Upper Peninsula...	801	81,197	Mich., Wisc.
Northern Wisconsin	1,288	231,116	Wisc., Mich.
Milwaukee	2,078	603,822	Wisconsin
Rockford-Freeport	185	53,283	Illinois
So. Bend-LaPorte-Elkhart	1,269	248,919	Ind., Mich.
<u>WEST NORTH CENTRAL:</u>			
<u>Northern Group</u>			
Black Hills	135	42,322	S. Dak., Wyo.
Cedar Rapids-Iowa City...	731	187,256	Ill., Iowa, Wisc.
Dubuque	212	53,804	Ill., Iowa, Wisc.

Orders	Number of Producers	Producer Milk (1,000 lbs)	States of Origin
<u>WEST NORTH CENTRAL-Con:</u>	:	:	:
<u>Northern Group-Con.</u>	:	:	:
Des Moines	1,347	201,862	Iowa
Duluth-Superior	1,275	181,610	Minn., Wis.
Eastern South Dakota ...	144	38,394	N. Dak., S. Dak.
Minneapolis-St. Paul ...	3,250	850,718	Minn., Wis.
North Central Iowa	704	209,162	Iowa, Minn.
Omaha-Lincoln-C.B.	1,402	280,084	Iowa, Nebr.
Platte Valley	356	82,743	Kansas, Nebr.
Quad Cities	903	200,264	Ill., Iowa, Wis.
Sioux City	325	68,990	Iowa, Nebr., S. Dak.
Sioux Falls-Mitchell ...	330	96,389	Iowa, Minn., S. Dak.
<u>Southern Group</u>	:	:	:
Kansas City	3,269	598,177	Iowa, Kansas, Missouri, Nebr.
Neosho Valley	780	127,275	Kansas, Mo., Okla.
Ozarks	1,040	177,371	Arkansas, Missouri
St. Louis	3,618	672,709	Ill., Iowa, Missouri
Southwest Kansas	258	55,498	Colo., Kansas, Oklahoma
Wichita,	822	201,671	Kansas, Oklahoma
<u>EAST SOUTH CENTRAL:</u>	:	:	:
<u>Central Mississippi</u>	1,021	181,466	Mississippi.
Chattanooga	761	144,799	Ala., Ga., Tenn.
Knoxville	968	169,772	Tennessee.
Louisville	1,902	371,240	Ind., Ky.
Memphis	1,014	187,523	Ark., Ky., Miss., Tenn.
Mississippi Delta	378	52,008	Miss., Tenn.
Mississippi Gulf Coast..	513	30,402	Miss., La.
Nashville	1,430	242,683	Ky., Tenn.
Paducah	302	49,468	Ill., Ky., Tenn.
<u>WEST SOUTH CENTRAL:</u>	:	:	:
<u>Northern Group</u>	:	:	:
Central Arkansas	974	190,144	Ark., Miss., Tenn.
Fort Smith	265	45,869	Ark., Okla.
Oklahoma Metrop. Area ..	2,551	485,757	Ark., Kansas, Mo., Okla.
Texas Panhandle	520	129,342	N. Mex., Okla., Texas
Red River Valley	575	98,191	Okla., Tenn.
<u>Southern Group</u>	:	:	:
Austin-Waco	403	138,095	Texas
Central West Texas	522	173,743	N. Mex., Texas
Corpus Christi	426	150,368	Texas
New Orleans	2,299	349,742	La., Miss.
Northern Louisiana	567	141,027	Ark., La., Texas
North Texas	3,065	901,877	Ark., Mo., Okla., Texas
San Antonio	529	211,830	Texas, Mo.

Orders	: Number	: Producer	:
	: Of	: Milk	: States of Origin
	:Producers:	(1,000 lbs)	:
<u>MOUNTAIN:</u>	:	:	:
Central Arizona	437	395,200	Ariz., Calif.
Colorado Springs-Pueblo. :	463	49,052	Colo.
Western Colorado	150	21,429	Colo.
	:	:	:
<u>PACIFIC:</u>	:	:	:
Inland Empire	811	158,898	Idaho, Mont., Wash.
Puget Sound	3,558	988,106	Wash.
	:	:	:
Total, (78 Markets) :	188,634	38,046,776	:
Estimated Farm Value ...	\$1,593,306,000	:	:

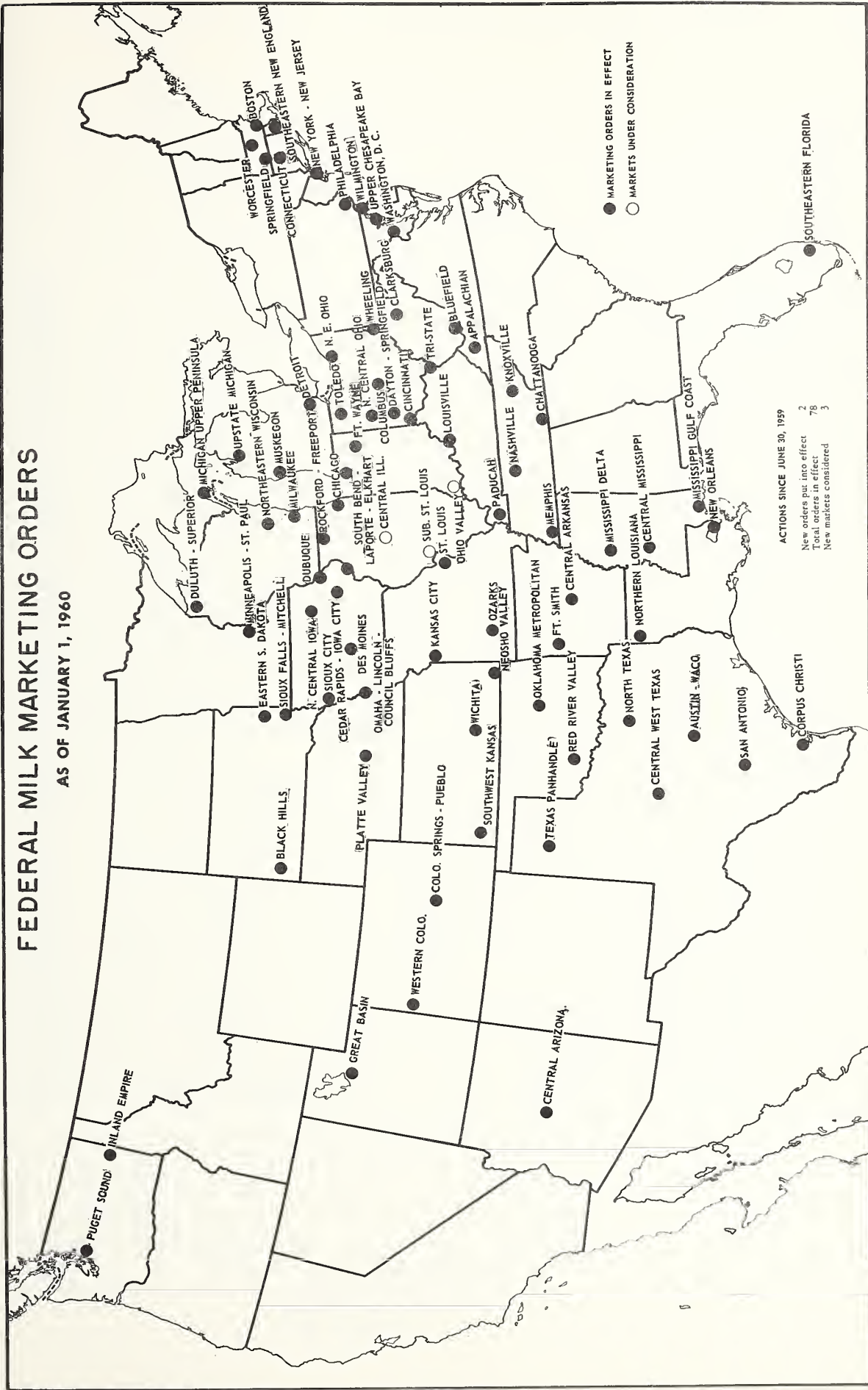
3. Fruit and Vegetable Marketing Agreement and Order Programs in Effect During Fiscal Year 1959

Orders in effect		Est. No. of Commercial Producers	Estimated Farm Values (\$1,000)
<u>Citrus fruits:</u>			
California - Arizona Navels Misc. Oranges	6,700	\$	61,242
California - Arizona Valencia Oranges ...	10,700	:	88,480
California - Arizona Desert grapefruit ..	2,000	:	7,800
California - Arizona lemons	6,100	:	38,420
(a) Florida oranges	)	:	280,053
(a) Florida grapefruit	15,000)	:	50,400
(a) Florida tangerines	)	:	11,160
Florida limes	500	:	1,024
<u>Deciduous fruits:</u>			
Florida avocados	600	:	511
California Tokay grapes	1,200	:	10,931
Colorado peaches	800	:	4,074
Georgia peaches	750	:	8,494
Utah peaches	1,000	:	840
(b) California Bartlett pears	3,450	:	26,650
(b) California plums	2,270	:	12,322
(b) California Elberta peaches	2,500	:	12,703
California nectarines	1,250	:	4,619
Oregon-Washington-California winter pears	2,350	:	10,747
Washington apricots	1,000	:	2,080
Washington sweet cherries	1,000	:	4,654
<u>Dried fruits:</u>			
California dates	300	:	2,053
California figs	300	:	4,501
California dried prunes	6,000	:	33,165
California raisins	8,000	:	54,352
<u>Vegetables:</u>			
Colorado peas and cauliflower	74	:	665
Florida Cucumbers	1,500	:	10,092
Florida tomatoes	1,400	:	39,031
Idaho-E. Oregon onions	300	:	6,407
Texas Tomatoes	3,000	:	3,404
<u>Potatoes:</u>			
Idaho-E. Oregon	8,500	:	45,600
Colorado	2,600	:	12,830
Oregon - California	1,800	:	12,098
Maine	4,700	:	37,250
Red River Valley	2,800	:	17,400
Virginia-North Carolina	4,000	:	8,400
Eastern South Dakota	267	:	798
Washington	1,100	:	10,290
New England except Maine	1,450	:	8,200
<u>Nuts:</u>			
California almonds	8,500	:	14,880
Oregon-Washington filberts	3,400	:	2,793
West Coast walnuts	20,000	:	35,529
Total, 37 orders	xxx	:	996,942

(a)- (b) - One order each respectively.

FEDERAL MILK MARKETING ORDERS

AS OF JANUARY 1, 1960





STATEMENT OF OBLIGATIONS UNDER ALLOTMENTS AND OTHER FUNDS

(Includes only those amounts which by November 30, 1959, were actually received or programmed for 1960 or 1961. Since work for other agencies is performed on a service basis at the request of those agencies and for their benefit, it is not practicable to estimate in advance all amounts to be received.)

Item	: Obligations, 1959	: Estimated Obligations, 1960	: Estimated Obligations, 1961
Allocation and Working Funds (Advanced from other agencies):	:	:	:
Department of Agriculture:	:	:	:
Commodity Credit Corporation (Capital funds):	:	:	:
Special milk program	\$74,455,155:	\$80,341,900:	\$83,341,900
Granary storage research program	28,334:	33,000:	33,000
National Wool Act of 1954.....	60,598:	64,500:	64,500
Total, (Capital funds)	74,544,087:	80,439,400:	83,439,400
(Administrative expenses):	:	:	:
Special milk program	612,387:	658,100:	658,100
Operation of commodity teletype	21,773:	22,600:	22,600
Crop reports and services in connection with price support programs	37,718:	37,900:	37,900
Storage research on CCC owned grain ..	97,828:	77,100:	77,100
Total, (Administrative expenses)	769,706:	795,700:	795,700
Total, Department of Agriculture ...	75,313,793:	81,235,100:	84,235,100
International Cooperation Administration:	:	:	:
Training services	51,994:	90,900:	- -
Technical consultation and support	28,140:	28,300:	- -
Administrative and other expenses	3,870:	5,700:	- -
Total, International Cooperation Administration	84,004:	124,900:	- -
Federal Civil Defense Administration:	:	:	:
For food plannint for defense emergency conditions	- - :	- - :	165,000
Total, Allocations and Working Funds	75,397,797:	81,360,000:	84,400,100
Trust Funds:	:	:	:
Expenses and Refunds, Inspection and Grading of Farm Products - inspection grading and certification of:	:	:	:
Cottonseed	21,871:	32,000:	32,100
Dairy products	1,729,263:	1,689,600:	1,702,200
Fresh and processed fruits and vegetables	5,667,552:	5,280,800:	5,317,900

(Continued on next page)

Item	Obligations, 1959	Estimated Obligations, 1960	Estimated Obligations, 1961
Trust Funds:			
Expenses and Refunds, Inspection and			
Grading of Farm Products - inspection,			
grading and certification of: (contd.)			
Meat	4,265,326:	4,688,100:	4,720,000
Naval Stores	14,430:	16,000:	16,100
Poultry products	4,026,607:	4,404,200:	4,889,300
Rice, hay, beans, seed, hops, and miscel-			
laneous agricultural commodities	1,346,713:	1,390,600:	1,402,600
Total, (Expenses and Refunds)	17,071,762:	17,501,300:	18,080,200
Miscellaneous Contributed Funds (princi-			
pally cooperative tests on cotton			
evaluation and miscellaneous cooperative			
marketing research)	94,665:	46,712:	32,000
Total, Trust Funds	17,166,427:	17,548,012:	18,112,200
Obligations under Reimbursements from			
Governmental and Other Sources:			
Marketing research and service:			
Marketing research and agricultural			
estimates	107,765:	140,000:	122,500
Marketing Services	4,292,040:	5,092,325:	5,198,615
Subtotal	4,399,805:	5,232,325:	5,321,115
Other	206:	8,785:	- -
Total, Reimbursements from Governmental			
and Other Sourves	4,400,011:	5,241,110:	5,321,115
TOTAL, OBLIGATIONS UNDER ALLOTMENTS AND			
OTHER FUNDS	96,964,235:	104,149,122:	107,833,415

NOTE--In addition, foreign currencies are available under section 104(k) of Public Law 480 for marketing research projects abroad. This work is conducted by the Agricultural Research Service with the assistance of the Agricultural Marketing Service in the review and appraisal of marketing research projects undertaken abroad. The dollar expenses of the Agricultural Marketing Service in connection with this work are paid from the appropriation "Marketing research and service." Information on the use of foreign currencies for research by the Department is contained in the Agricultural Research Service section of these Explanatory Notes.

PASSENGER MOTOR VEHICLES

The 1961 estimates provide for the replacement of 33 cars. The replacements represent 15 percent of the total 215 cars available to the AMS.

The 33 replacements in fiscal year 1961 include: (a) 11 cars for Marketing Research and Agricultural Estimates activities; (b) 17 cars for Marketing Services activities; (c) 5 cars for Marketing Inspection and related trust fund activities.

Passenger vehicles are replaced on the basis of justifications with respect to mileage and age standards prescribed by the General Services Administration which provide that vehicles to be replaced must be at least six or more years of age or driven 60,000 miles or more, and other factors.

The number of passenger motor vehicles estimated to be available for 1961 represents the minimum required to maintain essential services of the current programs of the Agricultural Marketing Service. These cars are used in providing the following necessary services: (1) carrying special grading and testing equipment used for inspecting and grading commodities and for performing other work required under U. S. Warehouse Act, Packers and Stockyards Act, U. S. Grain Standards Act, Cotton Acts, and Naval Stores Act; (2) carrying special crop meter equipment used in connection with surveying crop conditions at farms; (3) carrying boxes of cotton standards types used in classing work and demonstrations at farmers' meetings, and for carrying market news releases and related material for distribution at tobacco auction markets and for assistance to farmers in preparing tobacco for market; (4) for travel to places which are in most cases not accessible by common carrier, such as travel to farms, market terminals, offices of produce dealers and truckers, processing plants, canneries, stockyards, tobacco auction markets, cotton gins, plantation and compress operators, railroad yards, piers, grain elevators, and warehouses.

The age and mileage data for passenger motor vehicles on hand as of June 30, 1959, follows:

Age Data			Mileage Data		
Age - Year Model	Number of Vehicles	Percent of Total	Lifetime Mileage (Thousands)	Number Vehicles	Percent of Total
1954 or older	29	13	80-100	6	3
1955	22	10	60-80	20	9
1956	55	26	40-60	39	18
1957	43	20	20-40	67	31
1958	36	17	Under 20	83	39
1959	<u>30</u>	<u>14</u>			
			Total	<u>215</u>	<u>100</u>
Total	<u>215</u>	<u>100</u>			

FOREIGN AGRICULTURAL SERVICE

Purpose Statement

The Foreign Agricultural Service administers the foreign agricultural programs of the Department and develops plans and policies related to the administration of the foreign affairs and interests of U. S. agriculture. It disseminates to American agriculture the basic information essential to aggressive foreign marketing of U. S. agricultural products and to making necessary adjustments to meet changing situations abroad. The Service works in the following fields:

Foreign Market Development -- The Service conducts a broad program designed to develop foreign outlets for agricultural products and analyzes competition and demand factors relating to foreign marketing. It administers export programs, including programs under the Agricultural Trade Development and Assistance Act of 1954, as amended, and related authorizations, as well as import programs and controls. The Service represents the Department at international commodity conferences and on foreign commodity matters at national conferences. Work directly related to the development of foreign markets is financed (a) from funds, transferred to this appropriation from "Removal of surplus agricultural commodities" (Section 32 of the Act of August 24, 1935 as amended), and (b) with foreign currencies accruing from sales of agricultural commodities under section 104(a) of Public Law 480, the Agricultural Trade Development and Assistance Act of 1954, as amended.

Foreign Agricultural Trade and Analysis -- The Service directs and coordinates the continuous economic analysis and interpretation of world conditions and developments that significantly affect the retention and expansion of foreign markets for American products. It analyzes and interprets world trends in foreign agricultural products, trade, price, finance, consumption and economic policies of foreign governments as such trends effects United States foreign agricultural trade. It analyzes the effects of restrictive trade policies on the demand for American farm products and develops and coordinates the basic policies and programs for the removal or easing of restrictions and for the encouragement of world trade in American agricultural products. The Service participates in agricultural international organizations and trade conferences.

Agricultural Attaches -- The Service directs and coordinates a world-wide agricultural attache service with particular emphasis on the development of markets for American products, and on trade reporting from foreign areas designed to aid American farmers and exporters.

Agricultural and Horticultural Exhibitions -- The Service participates in foreign agricultural and horticultural exhibitions with foreign currencies accruing under section 104(m) of Public Law 480.

Assistance to International Cooperation Administration -- The Service also participates in the administration of the agricultural portion of the foreign assistance program with funds allocated from the International Cooperation Administration. This work includes coordination of the Department's participation in the program and direction of the training program for foreign

agricultural leaders, and the providing of technical information and advice in connection with the operation of the agricultural technical assistance program in foreign countries.

As of November 30, 1959, there were 830 employees in the Foreign Agricultural Service. Of this total, 648 were paid from the appropriation "Salaries and expenses, Foreign Agricultural Service", 77 were paid from foreign currencies, and 105 were paid from allocations and reimbursements from other agencies. Of the total number of employees, 579 were located in Washington, D. C., 4 in the U. S. outside the Washington Metropolitan area, and 247 were stationed in foreign countries.

	<u>Appropriated, 1960</u>	<u>Budget Estimate, 1961</u>
Salaries and expenses	\$3,518,300	\$4,637,300
Transfer from "Removal of Surplus Agricultural Commodities"	2,493,000	2,539,000
Salaries and expenses (Special foreign currency program)	a/5,843,378	14,621,800
Total	<u><u>11,854,678</u></u>	<u><u>21,798,100</u></u>

a/ Represents allocations of foreign currencies by the Budget Bureau. Obligations of foreign currencies in U. S. dollar equivalents are estimated at \$12,598,015, in fiscal year 1960.

(a) Salaries and Expenses

Appropriation Act, 1960	\$3,518,300	
Transfer from "Removal of surplus agricultural commodities"..	<u>2,493,000</u>	
Base for 1961	6,011,300	
Budget Estimate, 1961:		
Salaries and expenses	\$4,637,300	
Transfer from "Removal of surplus agricultural commodities"	<u>2,539,000</u>	<u>7,176,300</u>
Increase		<u><u>1,165,000</u></u>

SUMMARY OF INCREASES, 1961

Salaries and Expenses:

To analyze the potential for larger exports re-	
sulting from regional economic integration	15,000
To provide for collection, evaluation, and presentation of	
East European agricultural data	25,000
To provide in this appropriation the dollars to pay	
attache expenses paid in 1960 from foreign currencies	950,000
To provide for opening attache posts in selected Iron	
Curtain countries in Eastern Europe, and an additional	
post in Africa	110,000
For employee health benefit costs pursuant to Public Law	
86-382	19,000
	<u>1,119,000</u>

Transfer from "Removal of Surplus Agricultural Commodities":

To strengthen the international trade fairs program	30,000
For employee health benefit costs pursuant to Public Law	
86-382	16,000
	<u>46,000</u>

PROJECT STATEMENT

Project	1959	1960 (estimated)	Increase or Decrease		1961 (estimated)
			Health Bene- fit Costs (P.L. 86-382):	Other	
<u>Salaries and expenses:</u>					
1. Analysis of for-					
eign agriculture					
and trade	\$1,215,860	\$1,266,200	\$8,800	\$40,000(1)	\$1,315,000
2. Agricultural					
attaches	2,865,154	2,252,100	10,200	1,060,000(2)	3,322,300
Subtotal	4,081,014	3,518,300	19,000	1,100,000	4,637,300
<u>Removal of surplus agri-</u>					
<u>cultural commodities:</u>					
<u>(transfer):</u>					
3. Foreign market					
promotion	2,179,950	2,248,000	15,000	30,000(3)	2,293,000

Project	1959	1960 (estimated)	Increase or Decrease		1961 (estimated)
			Health Bene- fit Costs (P.L.86-382)	Other	
Removal of surplus ag- ricultural commodi- ties (transfer)Cont'd					
4. Import controls	240,584	245,000	1,000	- -	246,000
Subtotal	2,420,534	2,493,000	16,000	30,000	2,539,000
Total employee health benefit costs (P.L.86-382)	- -	- -	35,000	620	35,620
Total obligations or estimate	6,501,548	6,011,300	35,000(4)	1,130,000	7,176,300
Deduct:					
Transfer from "Remov- al of surplus ag- ricultural com- modities"	-2,420,534	-2,493,000	-16,000	-30,000	-2,539,000
Unobligated balance, Salaries and expenses	153,306	- -	- -	- -	- -
Transfer from "Con- servation reserve program, Commodity Stabilization Service"	-232,020	- -	- -	- -	- -
Total appropriation or estimate	4,002,300	3,518,300	19,000	1,100,000	4,637,300

a/ Applied costs for 1959 are \$6,410,267. The difference of \$91,281 reflects primarily, the excess of equipment, printing and reproduction ordered in 1959 over amounts used in that year.

INCREASES

(1) The increase of \$40,000 under the activity "Analysis of Foreign Agriculture and Trade" is composed of:

(a) An increase of \$15,000 to analyze the potential for larger exports resulting from regional economic integration.

Need for Increase. Of importance to agriculture are positive moves toward regional economic integration. Already in existence, and developing rapidly, is the six-country European Economic Community which now provides a market for approximately one-fourth of the total U. S. agricultural exports. In various stages of planning and implementation are similar projects in Central America, Latin America and Asia. The purpose of these moves is an expanding economy and a higher standard of living. This in turn means expanding markets. If the U.S. is to realize the full potential of these opportunities for larger exports, the Department must keep up with the developments in these important trading areas. It is proposed to strengthen the Trade Policy Staff to analyze the impact of these trade moves on U.S. agriculture.

(b) An increase of \$25,000 to provide for collection, evaluation, and presentation of East European agricultural data.

Need for Increase: Since the iron curtain countries in Eastern Europe represent an important agricultural area, there is need to collect, evaluate and present information on agricultural production, food and fiber consumption, stocks, and agricultural trade and developments for this part of the world. At the present time, agricultural data from this area are lacking or inadequate. Recent large expansion in agricultural production in the USSR and considerable increases in the Satellites indicate that this area may soon have export surpluses of considerable magnitude in food grains and perhaps cotton. These developments should be evaluated to determine their competition with U.S. agricultural products. The need for improving out information on East European countries is discussed further below under the increase for opening attache posts. With the requested increase of \$25,000, it is proposed to establish a small staff in an East European Analysis Branch to evaluate and report on agricultural developments in this important area.

(2) The increase of \$1,060,000 under the activity "Agricultural Attaches" is composed of:

(a) An increase of \$950,000 to provide in this appropriation the dollars to pay attache expenses which were paid from foreign currencies in 1960.

Need for Increase: The 1960 Appropriation Act provided the equivalent of \$1,310,000 in foreign currencies for the expenses of the Foreign Agricultural Service. Of this amount, \$950,000 is being used in the 1960 fiscal year in support of the Agricultural Attaches in foreign countries. The remaining \$360,000 is being used for general operating expenses of the market development program.

For the 1961 fiscal year, it is proposed to include the \$950,000 in the regular dollar appropriation instead of providing it by means of an authorization to use foreign currencies. This grew out of the budget proposal to provide separate dollar appropriations for the purchase of foreign currencies for Section 104 uses, and to limit these separate foreign currency appropriations to programs authorized by Section 104 of P.L. 480. Dollars will provide greater flexibility than the use of foreign currencies since it is not always practicable to use a particular currency at a particular time. Some foreign currencies are obtained by conversion. Waiting for conversion creates problems, resulting in disruption of the Attache activities. The use of dollars for the Attaches will overcome these kinds of operating problems. The requested increase of \$950,000 for 1961 will merely provide in the regular appropriation the dollars to pay Attache costs which were paid from foreign currencies in 1960, and will not increase the level of the program.

(b) An increase of \$110,000 to provide for opening Attache posts in selected iron curtain countries in Eastern Europe, and an additional post in Africa.

Need for Increase: The proposed increase is needed for the opening of Attache posts in selected iron curtain countries, an additional post

in Africa, and the collection and evaluation of data from East European iron curtain countries.

The opening of attache posts in Eastern Europe and the need for evaluation of data from this area are discussed under (1) (b) above and are both part of the overall problem of obtaining essential information regarding supplies, policies, trade practices, marketing opportunities, and particularly the potential effect on U.S. exports of agricultural products. Poland, for example, at one time an important exporter of agricultural products, has now industrialized and is a net importer. Eastern European coverage by trained agricultural observers would give important direction to the U.S. drive for markets in both competitive and market opportunity aspects. The countries in this area need cotton, tobacco, and food items. Traditionally, they export wheat, corn, and livestock products. They compete in Western Europe or augment agricultural resources of the Soviet Bloc, thus contributing to the Soviet drive for economic penetration of under-developed countries.

New posts are planned in the following countries:

Poland - The relatively free agriculture of Poland is unique among the Communist countries. Moreover, as of June 1959 the United States had signed P.L. 480 sales agreements with Poland of over \$200 million. The agricultural role of Poland in the economy of the Soviet Bloc and their potential effect on world trade are significant with agricultural products approximating \$422 million imports and exports of \$128 million in 1957. In view of these factors it is planned to station an agricultural attache in Warsaw to represent U.S. agricultural interests and report on current developments.

Rumania - Rumania is deep in the Communist area and historically the heart of the bread-basket of Eastern Europe. Economic and agricultural developments are still in a state of flux, but Rumania is now supplying food to the Soviet Bloc and emerging as a potential competitor in the world market for agricultural products. Current prospects are that Rumania may have over a million tons of corn for export from the 1959 crop. Therefore, it is desirable to station an agricultural attache at Bucharest to observe and report on developments in that and immediately adjacent areas of the Soviet Bloc.

Nigeria - The post at Lagos, Nigeria, would cover Nigeria, British Cameroons, French Cameroons, Spanish Guinea and the Autonomous Republics of Chad, Niger and Dahomey, encompassing an area almost one-half the size of the U.S. with approximately one-fourth the U.S. population. The area is a competitor of the U.S. in world vegetable oil market with large exports of peanuts and palm oil. It is also a major source of supply for U.S. cocoa needs, which puts dollars into the area.

Nigeria alone has a population approaching 40,000,000 people, the most populous country on the Continent of Africa with a rapidly growing food need. For example, its flour imports increased from 4,001 tons in 1948 to 45,000 in 1957. Nigeria had agricultural exports of \$334,000,000 in 1958, - its agricultural imports totaled \$41,000,000. It is an important dollar market for U.S. wheat, wheat flour and unmanufactured tobacco, with substantial resources for

earning foreign exchange.

In view of the rapid economic and social developments of this important area, it is planned to station an agricultural attache at Lagos to keep up with developments in the area, and to promote the expansion of markets for U.S. agricultural products.

(3) An increase of \$30,000 is proposed under the activity "Foreign Market Promotion" to strengthen the international trade fairs program (transfer from Sec. 32).

Need for Increase. Trade fair activities, which are part of the market development programs abroad, have increased from participation in three fairs during the first year of operation in fiscal 1955 to participation in 16 fairs during 1959. The number of fairs in 1960 will be about the same as 1959. However, with the emphasis shifting to a greater number of smaller exhibits, giving closer support to the promotional effects of cooperating industry groups, there is need for participation in more international trade fairs throughout the world. It is planned to expand this program to about 20 fairs in 1961. The proposed increase will provide for additional staff to enable the Service to provide supervision and management of these fairs.

(4) An increase of \$35,000 (composed of \$19,000 in direct appropriation request and \$16,000 transfer from "Removal of surplus agricultural commodities") is required to meet employee health benefit costs under Public Law 382, applicable to the base for 1961. A full explanation of the employee health benefit cost estimates appears in the "Preface" at the beginning of the Explanatory Notes.

CHANGE IN LANGUAGE

The estimates include a proposed change in the language of this item as follows (deleted matter enclosed in brackets):

For necessary expenses for the Foreign Agricultural Service * * *
[: Provided further, That, in addition, not to exceed the equivalent of \$1,310,000 in foreign currencies derived from sales under title I of the Agricultural Trade Development and Assistance Act of 1954, as amended, and made available to the Department of Agriculture, shall be available for expenses of the agricultural attache service and for general operating expenses of the Foreign Agricultural Service in carrying out the purposes of section 104(a) of that Act].

The proposed change would delete language authorizing the use of foreign currencies for expenses of the attache service and for general operating expenses in carrying out Section 104(a) of the Agricultural Trade Development and Assistance Act of 1954. The \$1,310,000 program level authorized for these purposes in fiscal year 1960 would be continued in 1961, through appropriation of \$950,000 under the regular Salaries and Expenses appropriation for expenses of the Agricultural Attache Service, and merger of the remaining \$360,000, formerly shown under the activity "Market development projects, general operating expenses", with the activity "Market development projects" under the proposed separate appropriation for the purchase of foreign currencies, under "Salaries and expenses (Special foreign currency program)".

STATUS OF PROGRAM

Current Activities: Current information of foreign agricultural production, markets, policies and competition are gathered, analyzed, interpreted and disseminated to United States farmers, business and Government. This information is made available, in person and through publications, wherever decisions are made on important foreign economic and other problems so that the interests and problems of the United States farmers may be taken into account in making those decisions.

The expansion and stabilization of world trade, particularly in agricultural products, is actively encouraged through the removal of barriers to trade, the solution of monetary problems, the study of foreign competition with American products, the analysis of market situations affecting the sale of agricultural commodities through the world, and making the information obtained available to the U. S. farmers, processors, exporters and other interested groups.

United States agricultural interests are represented and their position presented in the development of international agreements.

Agricultural attaches are stationed in fifty one countries throughout the world to represent U.S. agriculture at those posts. The attaches work includes a comprehensive system of reporting to meet the needs of U.S. agriculture, to act as the voice of American agriculture at the posts, and to take necessary action in the development of foreign markets for U.S. agricultural products.

A broad program is carried out for the development of markets abroad for United States agricultural products in surplus or potential surplus supply. Export programs, including those under the Agricultural Trade Development and Assistance Act, Public Law 480, and related authorizations, as well as import programs and controls are administered by the Service.

Work directly related to the development of foreign markets is financed from Section 32 funds ("Removal of Surplus Agricultural Commodities"). Beginning in 1960 these funds were transferred to and merged with the direct appropriation of the Foreign Agricultural Service.

Selected Examples of Recent Progress:

ANALYSIS OF FOREIGN AGRICULTURE AND TRADE

1. Agricultural Exports in Fiscal Year 1959 Sixth Highest on Record. As shown on the following table, U.S. agricultural exports totaled \$3,719 million in fiscal year 1959, 7% less than the \$4,003 million in 1958. Alltime high was 1957's \$4,728 million. Largest value changes among the export groups were the 49% reduction in cotton exports and the 16% increase in grains and feeds. In the latter group, wheat was up 7 percent over 1958; feed grains, 35 percent;

and rice, 7 percent. Among the other major export groups, vegetables increased by 12 percent, vegetable oils and oilseeds by 3 percent, and tobacco by 2 percent while fruits declined by 13 percent and livestock products by 9 percent.

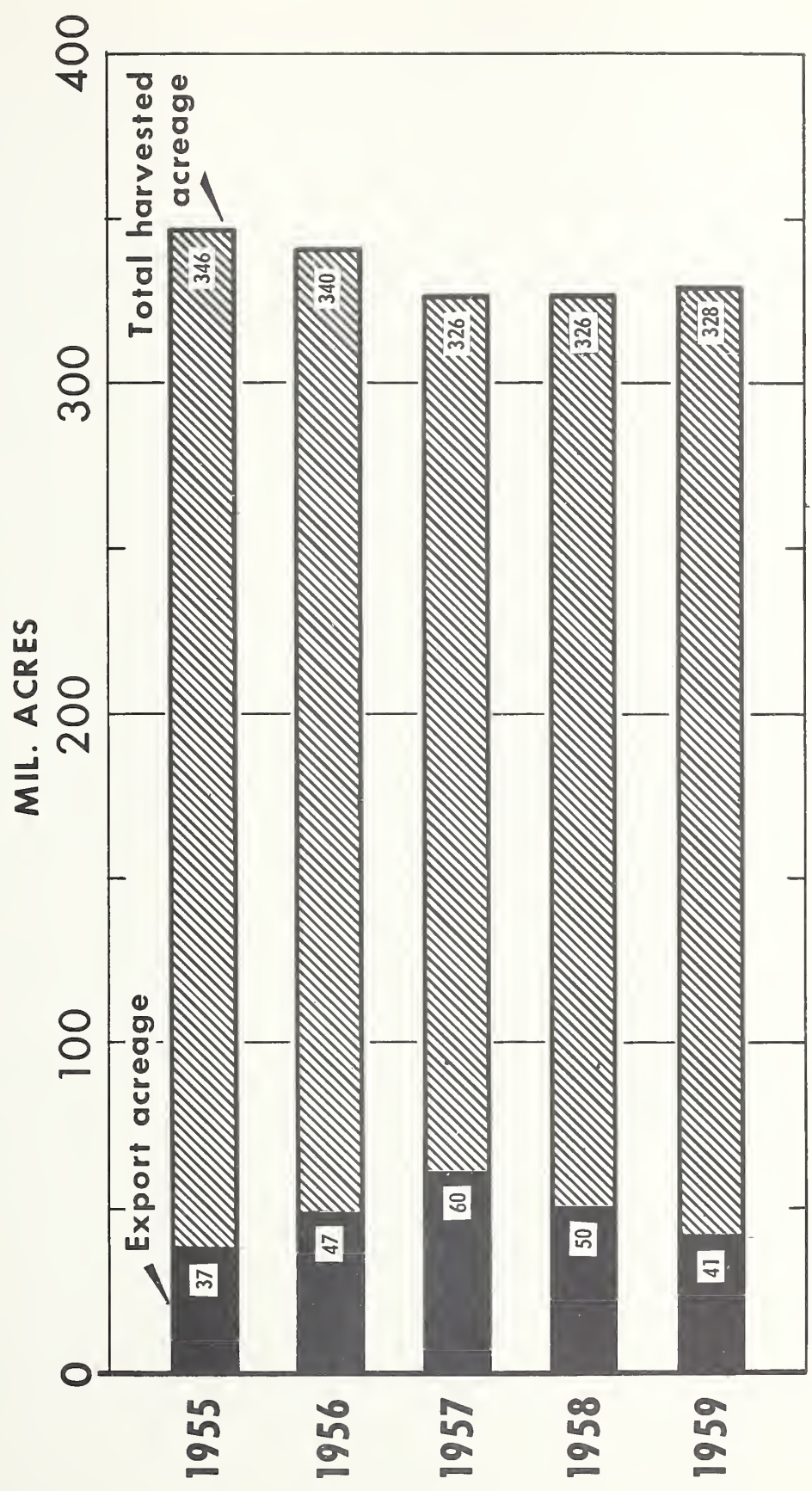
U. S. Agricultural Exports, Fiscal years 1958 and 1959

Commodity	1958	1959	Change
	\$ Million		Percent
Cotton.....	841	413	-49
Grains and feeds <u>1/</u>	1,318	1,523	+16
Tobacco, unmf'd.....	343	350	+ 2
Vegetable oils and oilseeds <u>1/</u>	413	425	+ 3
Fruits and preparations.....	262	229	-13
Vegetables and preparations <u>1/</u>	121	135	+12
Livestock products <u>1/</u>	585	532	- 9
Other <u>1/</u>	<u>120</u>	<u>112</u>	- 7
Total	4,003	3,719	- 7

1/ Includes private relief, mostly CCC donations to private welfare agencies for overseas distribution.

2. Production from One Out of Eight Acres Exported. Agricultural exports in fiscal 1959 represented the output of approximately 41 million harvested acres. This means that the production on one out of every eight harvested acres was exported. (Chart No. 1) In fiscal year 1958, the output of 50 million acres (1 acre out of each 6 1/2 of cropland) moved abroad. Exports in 1959 required financing, inland transportation, storage, and ocean transportation for over 32 million long tons of cargo--enough farm products to fill 800 thousand freight cars and 3,200 cargo ships. In moving these products, an average of 9 ships a day weighed anchor.
3. Export Market Benefits Many U.S. Farm Commodities. U. S. agricultural exports of some farm commodities comprise important segments of domestic output ranging from one-fourth for barley to three-fifths for dry edible peas. However with some 1959 exports particularly cotton coming largely out of CCC inventories which include the production of earlier years the percentages shown in the following table do not in all instances measure the amount of a given crop that was exported in fiscal year 1959. This was particularly true of cotton.

One Out of 8 U. S. Harvested Acres Produced for Export in 1959



YEAR ENDING JUNE 30

CHART NO. 1

USDA

FAS-NEG. 1934



U. S. agricultural exports in fiscal year 1959 compared with
1958 production

Commodity	Unit	Exports	Production	Comparison
		Million units		Percent
Dry edible peas.....	Bag	1.5	2.48	60
Milled rice.....	Bag	14.1	30.6	46
Tallow.....	Pound	1,117	2,739	41
Dried prunes.....	Pound	63	194	32
Soybeans and oil.....	Bushel	183	574	32
Tobacco (farm sales weight)..	Pound	534	1,758	30
Wheat and flour.....	Bushel	443	1,462	30
Cotton.....	Bale	3.1	11.6	27
Rye.....	Bushel	8.5	32.5	26
Barley (grain).....	Bushel	112	470	24

4. Exports of Feed Grains and Soybeans Highest on Record. Feed grain exports were up one-third in fiscal year 1959 over 1958. Exports of the 4 major grains--corn, barley, grain sorghums, and oats--including principle products--increased from 9.2 million short tons in 1958 to 12 million in 1959 a record high. There was a strong increase in European demand for U. S. feed grains mainly sorghum grains and barley. Soybean exports were up one-seventh and also set a new record in 1959. Volume increased from 88 million bushels in 1958 to 103 million in 1959, with large quantities again going to Western Europe, Japan, and Canada. The improved European demand stemmed from shorter copra supplies and reduced Northern European soybean stocks. Exports to Japan were up as a result of that country's break in trade relations with Communist China.
5. Agricultural Exports Excluding Cotton in Fiscal Year 1959 Ahead of 1958 by 5%. Excluding cotton, exports totaled \$3,306 million in 1959, 5% more than the \$3,162 million in 1958. The big commodity drop from fiscal year 1958 to 1959 was in cotton; a drop of 49% from \$841 million to \$413 million. Reduced foreign demand for U. S. cotton reflected: (1) Larger beginning stocks and production in foreign exporting countries, (2) weaker demand for and larger inventories of foreign textile goods, (3) substantially lower prices for most foreign growths compared with equivalent qualities of U. S. cotton, and (4) prospects for larger production of and lower export prices for U. S. cotton starting August 1, 1959.
6. Tobacco Export Sales Higher in Fiscal 1959: The total value of U. S. unmanufactured tobacco exports in fiscal 1959 is estimated at \$353 million--\$10 million higher than for fiscal 1958. Volume was about the same for both years and the increase in value reflects slightly higher export prices. Regular dollar sales in fiscal 1959 amounted to about \$324 million, compared with dollar exports of \$317 million in fiscal 1958. Foreign currency sales (P.L. 480 and Sec. 402 of P.L. 665) totaled about \$29 million in fiscal 1959, compared with \$26 million the previous year.

7. Wheat and Rice Exports Substantially Improved. In addition to the export records set by feed grains and soybeans, exports of wheat and rice, which had declined in fiscal year 1958 from record peaks in 1957, showed substantial improvement in 1959. Exports of wheat and wheat flour increased from 403 million bushels in 1958 to 443 million in 1959. (Chart No. 2) Last year's wheat exports were stimulated by larger shipments to Brazil and Europe, but the bulk of the gain came from expanded Title I exports to India. At the same time, milled rice exports increased from 11.8 million bags in 1958 to 14 million in 1959. (Chart No. 3).
8. Exports of Fats and Oils Also Improved in Fiscal Year 1959. Exports of edible vegetable oils (cottonseed oil and soybean oil) increased from 926 million pounds in fiscal year 1958 to 1,179 million in 1959. The increase in exports of edible vegetable oils reflected stepped-up programming under Title I for Spain, Turkey, and Yugoslavia. Both lard and tallow exports also improved in 1959, but lower prices kept the volume gains from being reflected in the values. Lard exports increased from 400 million pounds in 1958 to 464 million in 1959; and edible and inedible tallow, from 1,096 million to 1,117 million. Increased domestic output and lower export prices began to stimulate exports of animal fats and oils in late 1959.
9. Shift in Major Export Markets. U. S. agricultural exports to the 14 leading markets, as shown in the following table, accounted for 72% of total exports in fiscal year 1959 compared with 71% in 1958. (Chart No. 4) Exports to 6 of the 14 countries dropped appreciably in 1959; The United Kingdom, Japan, West Germany, Italy, Korea and Mexico. Sharply reduced shipments to Japan caused that country to fall from second place in 1958 to third place in 1959 as a market for U. S. farm products. Japan is usually the second largest outlet but in 1959 its purchases of U. S. cotton fell sharply as Japan's textile industry coped with overproduction, excess capacity, and lagging demand. Increased Title I shipments to India brought that country up from sixth to fifth place, displacing the Netherlands as one of the top-five foreign markets.

U. S. Agricultural Exports by Country of Destination,
Fiscal Years 1958 and 1959

Country	1958	1959:	Country	1958	1959
	\$ Million	:		\$ Million	
1. United Kingdom	439	400:	10. Italy	155	106
2. Canada	345	354:	11. Belgium	120	104
3. Japan	409	318:	12. Venezuela	82	87
4. West Germany	326	274:	13. Korea, Rep. of	106	81
5. India	179	251:	14. Mexico	120	73
6. Netherlands	210	243:	Other	<u>1,177</u>	<u>1,047</u>
7. Cuba	150	144:			
8. Spain	110	127:	Total	4,003	3,719
9. Yugoslavia	75	110:			

U. S. Wheat Exports Increase As Production Sets Record

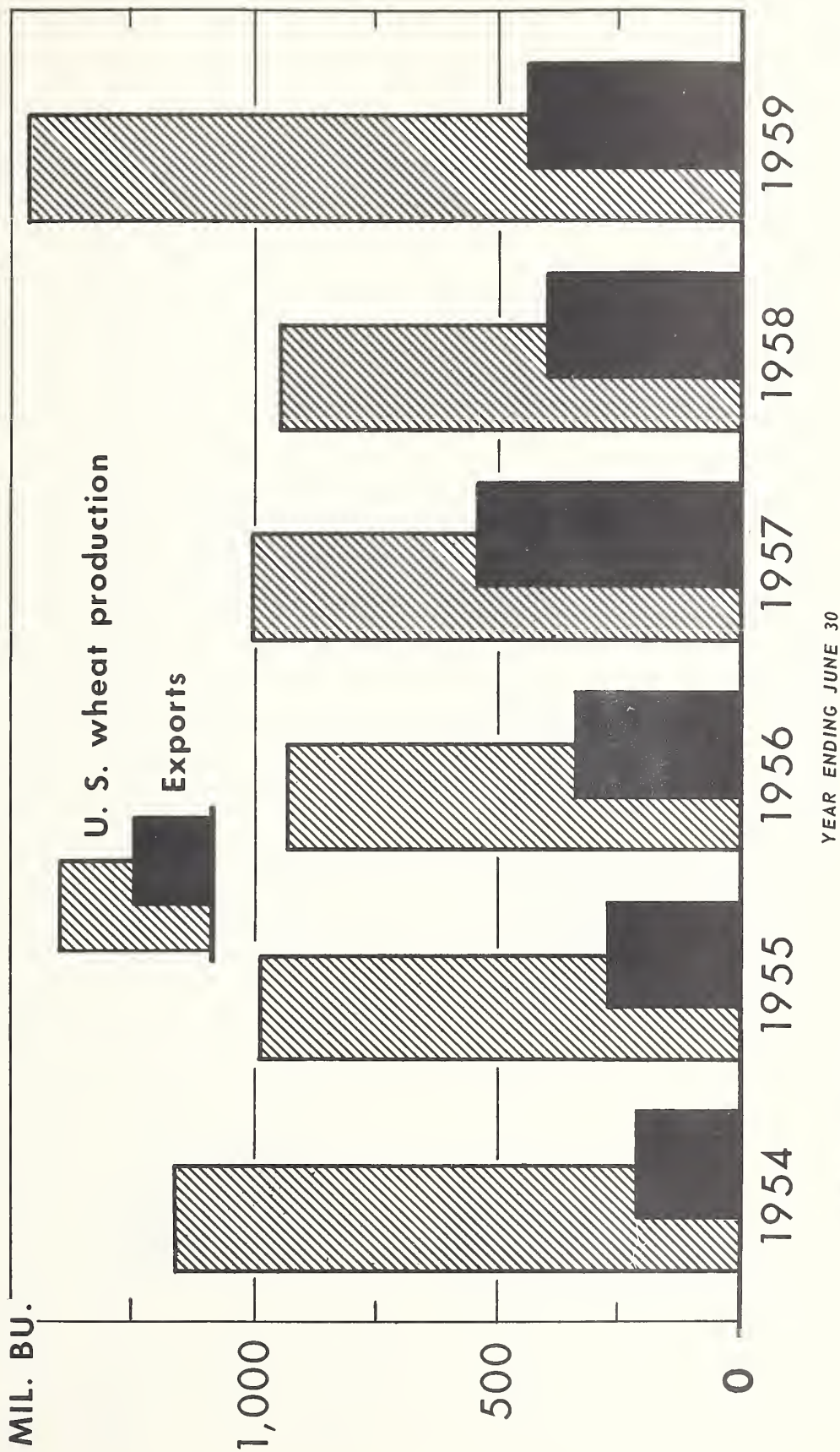


CHART NO. 2

USDA

FAS-NEG. 1959



U. S. Rice Exports Up; Cuba Still No. 1 Market

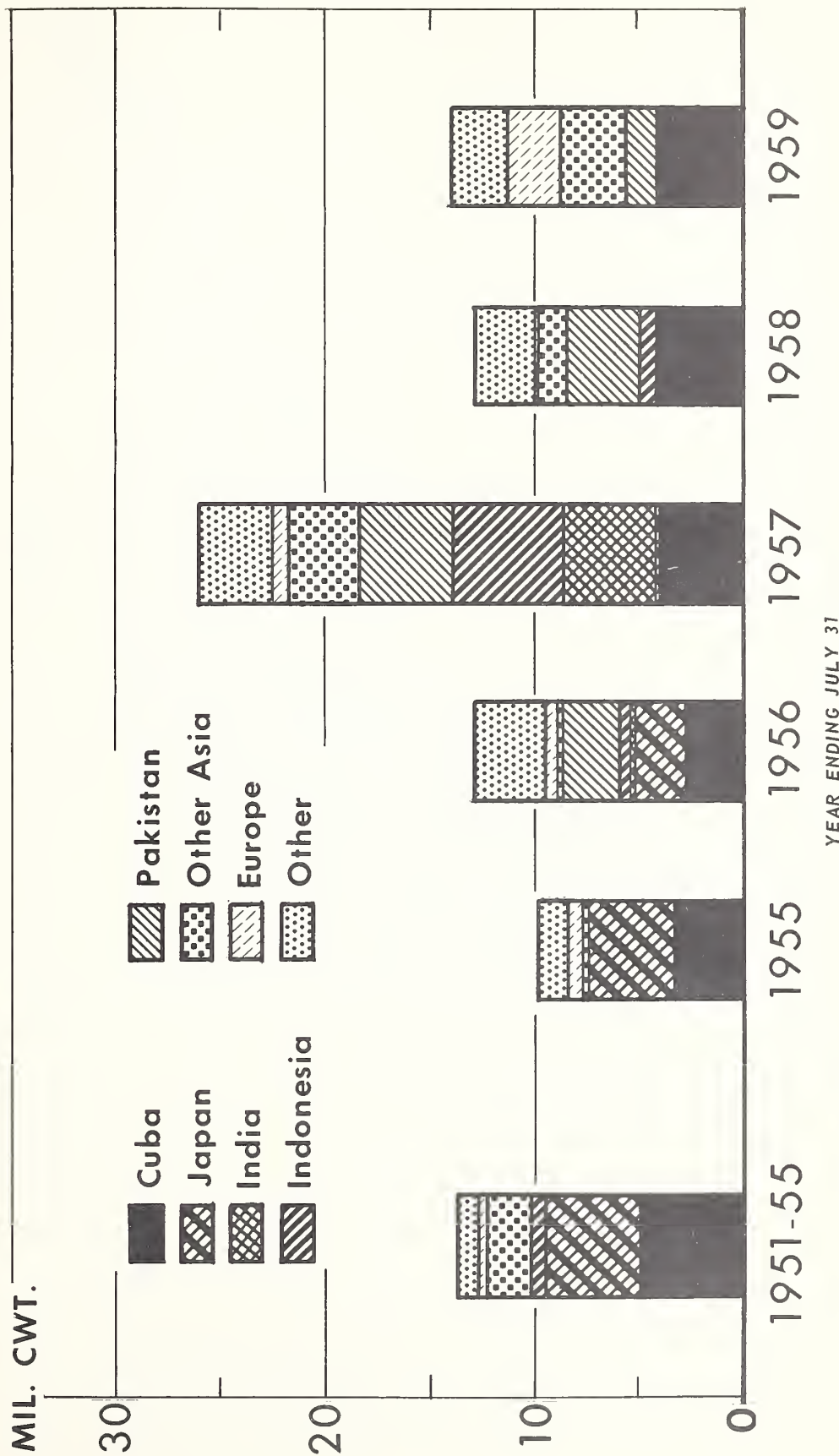


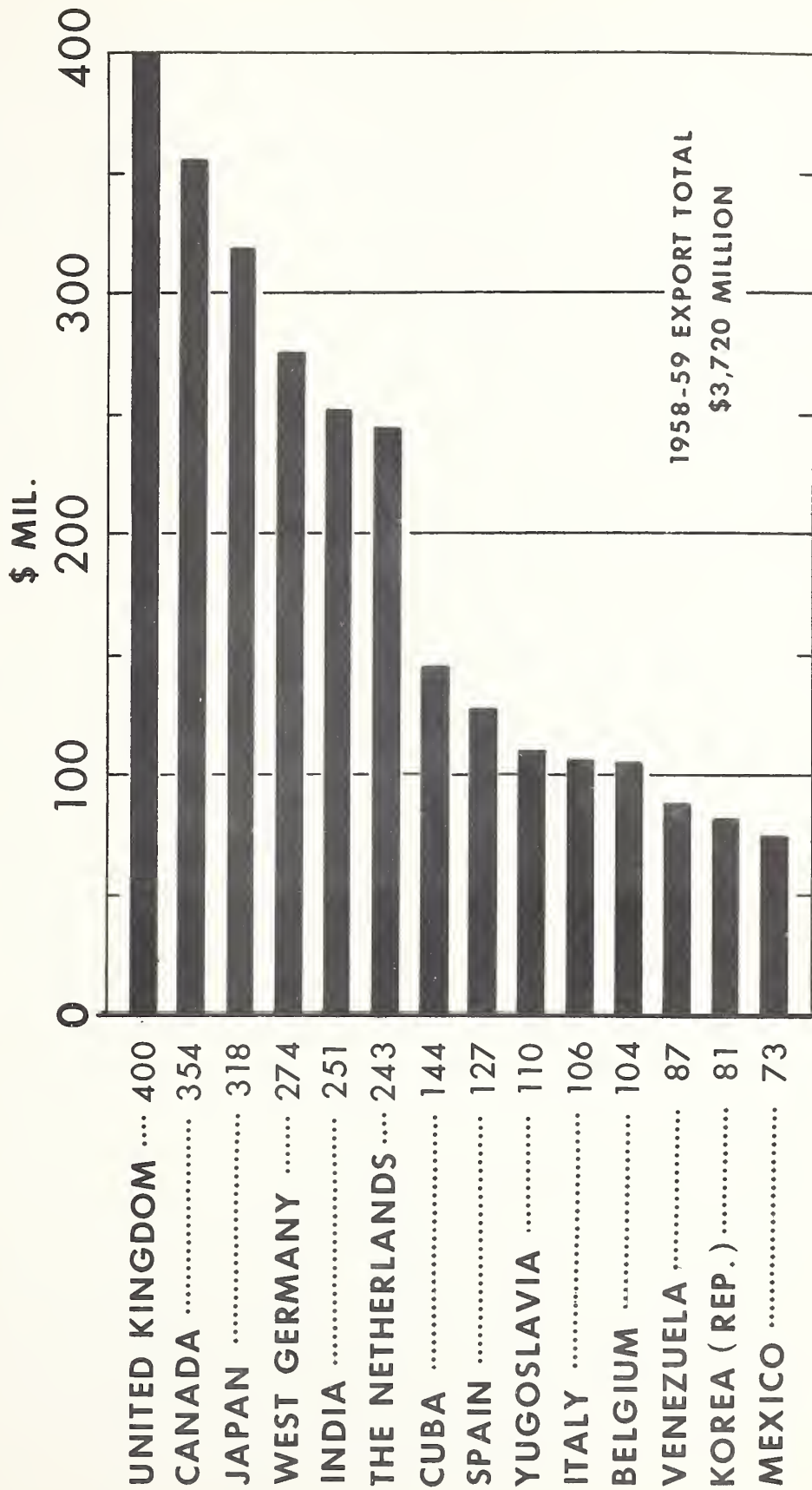
CHART NO. 3

USDA

FAS-NEG. 1972



72% of U. S. Agricultural Exports Go to 14 Markets



YEAR ENDING JUNE 30, 1959

CHART NO. 4

USDA

FAS-NEG. 1930



10. Agricultural Exports Under Government-financed Programs Somewhat Larger. U.S. agricultural exports under Government-financed programs were \$1,259 million in fiscal year 1959, somewhat ahead of the \$1,246 million in 1958. The year's export program activity was marked by substantial gains in Title I and barter shipments and increases in Mutual Security exports. Relief shipments declined, including both the emergency-type relief programs under Title II and the welfare-type programs under Title III of Public Law 480. These Public Law 480 and Mutual Security exports accounted for 34% of farm product exports in 1959 compared with 31% in 1958.
11. Agricultural Exports Outside of Government-financed Programs Decreased. Exports outside of Government-financed programs were \$2,460 million in fiscal year 1959, about \$300 million less than in 1958. About a third of the decline was due to smaller Export-Import Bank loans. Sales outside of Government-financed programs accounted for 66% of total farm product exports in 1959 compared with 69% in 1958. Exports outside Government-financed programs include, in addition to unassisted commercial transactions, shipments of some commodities with governmental assistance in the form of (1) short-term credits, (2) sales of Government-owned commodities at less than domestic market prices, and (3) export payments in cash or in kind.
12. Agricultural Exports Almost Double Supplementary Agricultural Imports. Supplementary imports--consisting of products most nearly like those produced by U. S. agriculture--totaled \$2 billion in fiscal year 1959. The ratio of agricultural exports to supplementary imports was 1.8 to 1. In other words, exports were almost double imports of like commodities. Excluding cane sugar imports which are classified as supplementary but are under import control, the ratio was 2.5 to 1. Supplementary imports were the largest in eight years. The gain was due mainly to larger imports of cattle and meats. Other agricultural imports consisting of complementary items--coffee, natural rubber, cocoa beans, bananas, etc.--which are not produced commercially in the United States totaled \$2 billion in fiscal 1959, down 5% from fiscal 1958.
13. Prospects for U. S. Exports of Cotton Analyzed. The competitive forces that are likely to confront U. S. cotton in world markets during the next few years were analyzed. Despite the upturn in world carryover of cotton in 1958-59, the longer-term outlook for cotton was found more promising. The assumptions of increased population, improved economic conditions, lower and more stable cotton prices, and plentiful cotton supplies foreshadow increased cotton trade and consumption. However, to achieve a closer balance between supply and disappearance, some cutback in plans for increasing production may be necessary in countries that cannot maintain production incentives and large stocks of cotton. The report points out that cotton's competitive position with man-made fibers, and the total demand for cotton, will be improved by increased research; more effective market development; promotional, technical assistance, and aid programs; and improvements in cotton quality and merchandising. As a leader in all of these activities, the United States can be expected to participate to a major extent in the world trade in cotton.

14. Competition Study of Russia's Cotton Production, Consumption, and Trade. A team of U. S. cotton specialists, including an FAS representative, visited Russia's cotton producing areas, gins, experiment stations, mills, and agricultural colleges to study Russia's present and potential status in world cotton production, trade, and consumption. The report showed that Russian cotton production, trade, and consumption have increased steadily in postwar years, placing that country second only to the United States in all three categories prior to 1958, when Communist China probably moved into second place. Production in 1958-59 reached nearly 7.0 million bales, consumption 5.7 million, export 1.5 million, and imports (mostly Egyptian-type cotton) 0.5 million bales. Production was doubled during the past 10 years, and a further increase of about 30% is planned by 1965. Such an increase (over 2.0 million bales), if attained, can be either absorbed on the domestic market, where it is needed, or exported under bilateral trade arrangements, as most cotton exports have been handled in the past. Price is not necessarily an important factor under the Communist trading system.
15. Competition study of South American Cotton. For the purpose of assessing their influence in the years ahead on the competitive position of U.S. cotton in foreign markets, on-the-spot studies were made of the raw cotton and cotton textile economies in each of 7 cotton producing countries in South America. These countries account for practically all of the production and 94% of the consumption on that continent. Some of the more significant findings follow:

In South Brazil, cotton production will continue to be influenced to a much greater extent by the fortunes of coffee than by world cotton conditions. Some relatively unprofitable coffee acreage may be shifted to cotton, with the bulk of any expansion in production reflected in increased exports. The greatest outlet for Brazilian cotton will continue to be the domestic market.

In early 1959, Argentina completed a disastrous cotton harvest, involving a drop in production of more than 50%. This decline is mainly attributed to severe pink bollworm infestation, although excessive moisture was also a factor. With the current crop substantially smaller than domestic mill requirements, and with uncertainty existing over the effectiveness of pink bollworm control measures during the coming year, there is a distinct possibility that Argentina may become a significant market for U. S. cotton during the 1959 and 1960 marketing years.

Peru has expanded production of extra long staple cotton in recent years. Nevertheless she is prone to hold the United States accountable for the low level of cotton prices rather than recognize that Peru has contributed to the chronic world surplus of extra long staple cotton and, consequently, to weakened prices for such cottons.

Colombia has made rapid strides in expanding both production and consumption of cotton, but import requirements have held generally constant. Efforts to achieve a balance between foreign exchange

earnings and expenditures have made it more difficult and expensive to import textile machinery and raw cotton. The effect has been to encourage domestic production of cotton while at the same time to retard expansion of mills. If these divergent trends are not arrested, Colombia's cotton import requirements and U. S. exports of cotton to Colombia may decline--possibly reaching zero.

16. Study of Communist China's Cotton Textile Exports. An FAS report on competition from Communist China's cotton textile exports received world-wide distribution and aroused considerable comment in the trade press in view of the universal interest in the subject. Communist China has made a concerted effort in recent years to re-enter and expand trade with Free World countries, and cotton textiles have been an important item in this trade drive. The drive was made possible by a tripling of cotton production in the last decade and by increased cotton mill capacity, which in turn was a direct result of expanded primary production of textile machinery. Communist China emerged as a large-scale supplier of cotton textiles when in 1958 an estimated 450 million yards were shipped to world markets. This volume is nearly double the previous record established in 1956. It adversely affected U. S. exports of raw cotton to some of the most important customers for U. S. cotton.

The "target" of the Communist Chinese trade drive seemed to be Southeast Asia, particularly Indonesia, Hong Kong, Thailand, and Malaya--although Western Europe and Africa were also affected. These inroads were accomplished by prices considerably under world levels for similar goods and other inducements such as low-interest bearing, long-term loans; aggressive selling methods; and techniques heretofore unused by the Chinese Communists. Some countries countered by adopting anti-dumping measures, others by an outright ban on trade with Red China.

17. Filled Milk in Philippines Reduces Demand for U. S. Evaporated Milk. A recent survey indicates that production of canned filled milk, by plants in the Philippine Islands, the major foreign market for U. S. evaporated milk, is expected to reach 3 million cases in 1959. This is causing considerable shrinkage in the market for this product, which has been supplied principally by the United States and the Netherlands in the past. The local filled milk, packaged similar to U. S. evaporated milk is made with refined coconut oil (6%) and nonfat dry milk (20%). The total solids percentage is thus almost identical with that of U. S. evaporated milk which is 7.9% butterfat and 18% other solids. Imports of U. S. evaporated milk have declined from over 2.8 million cases in 1956 and 1957 to less than 2.3 million in 1958, and 1959 imports are expected to be about 1.4 million. However, there is a well defined preference for U. S. brands, especially for infant feeding. As a result U. S. evaporated milk is now holding its share of the reduced imports (95% of 1958 total imports), although the average retail differential of about 6.5 cents per 14-1/2 ounce can over local filled milk is substantial. It appears that U. S. producers may expect a market for their product for a considerable period of time in the Philippines, but at lower levels than in the past.

18. U. S. Dry Whole Milk in Venezuela. An on-the-spot study disclosed that the United States is facing severe price competition from European brands of dry whole milk in Venezuela, the largest foreign market for this product. The average retail price of three leading U. S. brands of dry whole milk, in 5-pound cans, in December 1958 was 67.5 cents per pound, compared with an average price of 52 cents for three leading Dutch and Danish brands and 46.7 cents for four other prominent European brands. Thus, U. S. brands were being undersold by an average of about 15.5 cents and 21 cents per pound, respectively. The Venezuelan Government is seeking to expand the dairy industry by paying a substantial subsidy to milk producers and by encouraging the sale of locally produced dry whole milk. The prevailing retail price of the latter, which is similar in composition to many imported brands, was 51 cents per pound, 16.5 cents per pound below the price of selected U. S. brands. In encouraging importers to purchase and distribute the local product, the import duty of 6.8 cents per pound is waived on each 5 pounds imported if one pound of local production is purchased and distributed.

Denmark, Canada, and the Netherlands furnish the principal competition for U. S. dry whole milk. U. S. exports have declined from 36 million pounds in 1955 to 24 million pounds in 1958. The U. S. product is favored currently by a lower freight cost, faster delivery service, and consumer preference, but, unless prices of U. S. brands become more competitive, a further decline in exports to Venezuela may be expected.

19. Fats and Oils Economy of Argentina Analyzed. Argentina is a major exporter of linseed oil and at times has exported substantial quantities of edible oils. The study shows that annual production of edible vegetable oils during the next few years is likely to range from a quantity just somewhat short of meeting domestic consumption to a moderate exportable surplus. The determining influence will be fluctuations in prices to farmers for sunflower and peanuts relative to prices for competitive crops. This assumes that growing conditions will not deviate greatly from the average. The trend in flaxseed acreage will, to a large extent, depend on price relationships between wheat and flaxseed. With favorable weather, Argentina is likely to continue to have large quantities of linseed oil available for export.
20. Fats and Oils Industry in West Africa Investigated. The study revealed that the production and exports of peanuts, palm kernels, and palm oil will increase somewhat in the next few years. Domestic consumption of palm oil will increase as population rises, so that net future exportable supplies of this oil may be curtailed. Improved marketing and processing techniques have in recent years resulted in higher quality products being exported from West Africa. Much of the palm oil is now being used for edible products, whereas formerly it was used for soap and other industrial products.

21. Italian Deciduous Fruit Industry Expanding. Intensive plantings of apples began in 1943, and the 1958 crop set a new record which was 6 times prewar production. Pears and peaches have expanded sharply, but not as rapidly as apples. Italian production will trend sharply upward during the next few years. Despite this sharp upward trend in Italian production, the United States can continue to export high quality apples and pears to northern Europe.
22. Brazil to Continue as Large Wheat Importer. Results of Brazil's wheat expansion program were surveyed to determine prospects for continued expansion in production and other developments likely to affect the future competitive status of U. S. wheat and flour in that market. The expansion program was inaugurated in the late 1930's to reduce drains on foreign exchange required to finance the country's increasing wheat requirements and assure sufficient foreign exchange for purchase of raw materials and equipment needed for the country's expanding industrialization. Measures to accomplish these objectives included producer price supports, compulsory use of home-grown wheat by domestic flour mills, government control of wheat and flour imports, refusal of imported wheat to flour mills until fixed quotas of indigenous wheat had been purchased, and technical aid to growers.

The success of the program in bringing about more than a 7 fold increase in wheat production in less than 2 decades ranks as one of the most outstanding accomplishments in the history of Brazilian agriculture. But the increase was outbalanced by population growth and the increased demand resulting from higher consumer purchasing power and improvements in dietary standards. At current consumption levels, Brazil will need 4 million tons of wheat annually by 1970. Largely because of high production costs, competition for use of the land, and availability of abundant supplies at lower prices from Argentina and the United States, there is little likelihood of acreage expanding sufficiently to take care of more than 30 to 35% of anticipated requirements. The bulk of the import requirements will continue to be supplied by Argentina and the United States.

23. Foreign Government Wheat Production and Trade Policies. Studies made during 1959 show that virtually all of the wheat now produced in foreign importing and competing exporting countries is grown and marketed under some form of governmental support and assistance. For both importing and exporting countries, the overall objective is maintenance of desired levels of agricultural income and satisfactory balances of foreign exchange.

In importing countries such measures include producer price supports; subsidies for production requisites; compulsory use of specified percentages of home-grown wheat; subsidies to flour mills and consumers to soften the impact of high support prices; and import controls, especially governmental monopolization of imports, import licensing systems, foreign exchange controls, and bilateral trade agreements. In exporting countries they consist mainly of steps to facilitate the sale of surpluses abroad while at the same time assuring that returns to growers will not fall below a minimum

guaranteed for the entire crop. They include producer price supports; governmental monopolization of exports; barter and bilateral agreements; and more or less indirect subsidies through arrangements for governmental absorption of losses on exports.

The effect of such measures in importing countries has been increased production, even though costs are higher than in exporting areas; increased production of high-yielding varieties at the expense of quality; increased technical difficulties in milling flour of desired quality because of the frequent adjustments in milling procedures necessitated by changing extraction and incorporation rates; increased consumer prices for wheat and wheat products, except when compensated by subsidies; and such increases in supplies of low grade wheat that some of the traditionally deficit countries find themselves with surpluses which have to be diverted to feed use or into export channels.

In exporting countries, such measures have resulted in maintaining production at high or even increased levels; elimination of the possibility of farmers to sell wheat on the open market; increased government to government sales under bilateral and barter agreements and in some instances encroachment upon traditional markets of other exporters by new suppliers. The combined effect of governmental intervention in wheat importing and exporting countries has been failure to adjust the world's supply to effective demand.

24. Record World Breadgrain Harvest in 1958. World production of breadgrains was analyzed as the basis for evaluating import requirements in different parts of the world, as well as potential U. S. competition from surplus producing areas. This is the only source of production tables showing detailed country data and estimated totals for the entire world. They are widely used in U. S. trade circles and are in general use by governmental officials and the trade of a number of foreign countries.

The last survey showed the Soviet Union has been the world's ranking wheat producer in recent years. The record United States harvest in 1958 was only about two-thirds the volume of the record Soviet outturn. A sharply expanding wheat production in the Soviet Union indicates that U. S. exporters will face expanding competition from that source. The Soviets are also the world's leading rye producer, with that country's 1958 crop accounting for 45% of the world total.

25. Record World Corn Crop in 1958. An all-time record corn crop in the United States was the main feature of the record world production in 1958. A new record was set in the Soviet Union, also, marking some success in the Soviet program for greatly expanded corn production. At the new high, however, Soviet production was only 7% of the world total in contrast with the U. S. share of 52% of world corn production.

26. World Rice Acreage, Production and Trade at High Level. Studies of the world rice crop revealed that world rice acreage increased steadily in recent years. Also, improved cultivation practices raised the average yields per acre. Therefore, world rice production is now at an unusually high level. The June and November production summaries inform the U. S. rice industry of possible developments in rice surpluses or shortages in foreign countries. They are the only complete world rice crop forecasts available.

A report on Burma's new bumper rice crop and prospective export surplus was published. The study included current trade agreements and price prospects. Burma, the leading world exporter of rice, is a strong competitor for U. S. markets.

27. Competitive Position of U. S. Hops in World Markets. An on-the-spot survey showed high world market prices for hops during recent years because world production was not keeping pace with increasing world demand for beer. This encouraged producers in competing exporting countries to expand hops production. The 1958 world crop reached an all-time record of almost 174 million pounds compared with the previous record of 147 million pounds in 1957. The increase took place mainly in the United States, Germany, Czechoslovakia, the United Kingdom, France, Canada, and Yugoslavia.

Despite increasing competition for export markets, U. S. exports in 1957-58 (September-August) reached an all-time record of 16.9 million pounds. They are expected to remain at about the same level in 1959-60. Reasons are growing appreciation in foreign breweries of the value of U. S. hops for light beers, the availability of hops of excellent quality from the United States at reasonable prices, expectations of a continued high level of beer consumption in foreign countries as consumer purchasing power improves, and the good merchandising practices of U. S. exporters of hops.

28. Australian Livestock and Meat Industry and the U. S. Producer. This study analyzes current trends in the livestock industry of Australia and appraises the potential for further expansion in production of meat and other livestock products. The U. S. producer faces increasing competition from Australia--both in the U. S. market and abroad. Meat production in Australia is now at an all-time high. Cattle and sheep numbers have increased 33% since World War II. Government policy and high prices are expected to encourage further expansion. Within the last year, U. S. imports of Australian beef and mutton have increased sharply and attained a significant level for the first time. The report points out that Australia is likely to continue to ship meat to the United States in quantities sufficient to offer considerable competition to the U. S. livestock industry.

29. U. S. Variety Meats in World Markets. Exports of U. S. variety meats have shown a spectacular increase in recent years. They have become so important to the U. S. livestock industry that an analysis of trade among major producers, exporters and importers has been made to show the U. S. position in world markets. The study points out those countries in which production is increasing and from which

increasing competition can be expected. It also notes that nearly every country that imports variety meats imposes some sort of restriction; many of these are directed primarily at the United States. Production of variety meats in the United States is increasing at a faster rate than consumption. With a mounting surplus, the immediate problem is to increase exports in the face of mounting world competition and marketing problems.

30. U. S. Hides Confronted With Increased Competition in World Markets. An analysis of the international hide and calf and kip skin markets shows that keen competition has developed in recent years. U. S. hides have been exported only a relatively short time, and exporters are behind competitors in the processing and packing expected by buyers in importing countries. U. S. methods of hide preservation, although adequate for domestic shipment, frequently result in hides arriving at foreign ports in unsatisfactory condition. Some of the principal competing countries have special arrangements, such as trade agreements or preferential tariffs, with importing nations which give them an advantage over U. S. exporters. Increased use of synthetic materials by shoe manufacturers is reducing world consumption of hides.
31. Increased Tariffs and Barriers to Exports of U. S. Tobacco and Cigarettes. Since 1957 about 60 countries and areas have increased the import duties on tobacco and tobacco products or made preferential or bilateral arrangements for tobaccos from certain sources. In about three-fourths of these cases the increased barriers have the most adverse effect on U. S. tobaccos.

The most important of these actions were taken by the United Kingdom, Australia, Portugal, the Philippines, and six members of the European Economic Community. The latest moves against U. S. tobacco are by Venezuela and Cuba which are attempting to eliminate imports of U. S. cigarettes. Venezuela imports about 2.5 billion U. S. cigarettes per year (equivalent to 6.25 million pounds of tobacco) and Cuba imports 444 million cigarettes (equivalent to about 1.1 million pounds of tobacco).
32. High Import Duty For Tobacco Proposed For The European Economic Community. The effects of the 30% ad valorem duty proposed on unmanufactured tobacco for the European Economic Community were evaluated. FAS participated in the consultations on the effects of the proposed duties on tobacco and tropical products and the inclusion of the Associated Overseas Areas as a free trade area with the six members of the European Community, and possible means of reaching a mutually acceptable solution to the problems. The Department of State has taken a strong position against the high duty proposed and will negotiate on the duty in 1960 unless a mutually acceptable solution is found prior to that time.
33. U. S. Agricultural Trade Analyzed. Tables have been prepared for 20 countries in Latin America and for 33 countries in Africa and the Middle East summarizing trade in agricultural commodities giving for the principal commodities of both import and export trade the major

countries of origin and destination. These tables are being used by FAS and other agencies in analyzing the trends and patterns of trade of the individual countries. Such use assists in developing recommendations benefiting American agriculture. These trade tables are also beneficial in helping to point up the "normal marketings" concept of a country. The tables also point out the competition with which U. S. products are confronted in these countries.

34. Proceeds of Sales Increased by Negotiation of More Favorable Exchange Rate Provisions: Where the currencies of foreign countries participating in the Title I PL 480 agricultural commodities sales program are devalued or depreciated by Government action, it becomes necessary to renegotiate the specific exchange rates applicable to such sales. During fiscal year 1959, such negotiations were necessary in the case of five countries: Brazil, Turkey, Yugoslavia, France, and the United Arab Republic. In the first three cases, long and difficult negotiations were necessary. All were successfully concluded. In the case of Brazil and Turkey, the previous arrangements, although they were the best obtainable at the time, has resulted in exchange losses to the United States in the utilization of the currencies; under the new arrangements these losses are eliminated.
35. Payment Obtained For Long-Standing Deposit Shortfall Due to Exchange Rate Problems: Under the fiscal year 1956 Title I PL 480 agreement with the United Arab Republic (Egypt) there had been an outstanding payment shortfall of approximately \$146,000. This reflected the fact that deposits had been made at an exchange rate different from that provided in the sales agreement. Efforts to recover this sum had been broken off because of the Suez Canal crisis and related subsequent developments. During fiscal year 1959, in connection with negotiation with a new sales agreement, payment of the shortfall was finally obtained.
36. Western European Currencies Made Convertible For "Non-Residents": In December 1958, ten Western European countries made their currencies convertible for "non-residents." In subsequent months four additional Western European countries took similar measures. While these acts in themselves did not reduce restrictions on the importation of U. S. commodities by citizens of the countries concerned, U. S. export opportunities benefited in three important ways: (a) the removal on external transfer ability has had a stimulating effect on trade generally; (b) specific removal of restrictions on imports from the U. S. accompanied the measures in a number of instances; and (c) the economic and legal basis for discrimination against the dollar area was eliminated. This latter development has particular practical significance in the administration and fulfillment of various international agreements to which these countries are party. Action to capitalize on such opportunities is progressing.
37. Further Removal of Restrictions Against U. S. Agricultural Exports Under GATT: a. During fiscal 1959, U. S. officials participated in consultations held with 16 GATT (General Agreement on Tariffs and Trade) countries, with reference to the possibilities for further relaxation of their import restrictions, since, in general, there had been an improvement in the balance of payments position of these countries.

Some success has been achieved as a result of these efforts largely initiated by representatives of the FAS in the case of U. S. agricultural products. Such efforts have also been reinforced, in some cases, by representations through usual diplomatic channels of which the Agricultural Attache is a part. During this period, the United Kingdom liberalized its import policy on at least 25 agricultural items, the most significant to American agriculture being increased quotas on various fruit items; but this list also included such items as cheese, honey, certain beef products, eggs and nuts. Other GATT countries also have removed import restrictions on a number of American farm products, partially as a result of these consultations (Chart No. 5). This list includes such diverse products as edible vegetable oils, grain and grain products, raw cotton, cotton linters and waste, oil cake and meal, livestock and livestock products, tobacco, dairy products, seeds, rosin and many fruit and some vegetable items, (Chart No. 6).

Under revised GATT procedures effective in 1959, countries imposing quotas for balance of payments reasons will begin to consult on a regular basis with the Contracting Parties regarding the extent of these restrictions, their conformity with GATT principles, and their effect on other contracting parties. The new comprehensive consultations are to be conducted generally on an annual basis for industrial nations and biennially for less developed countries.

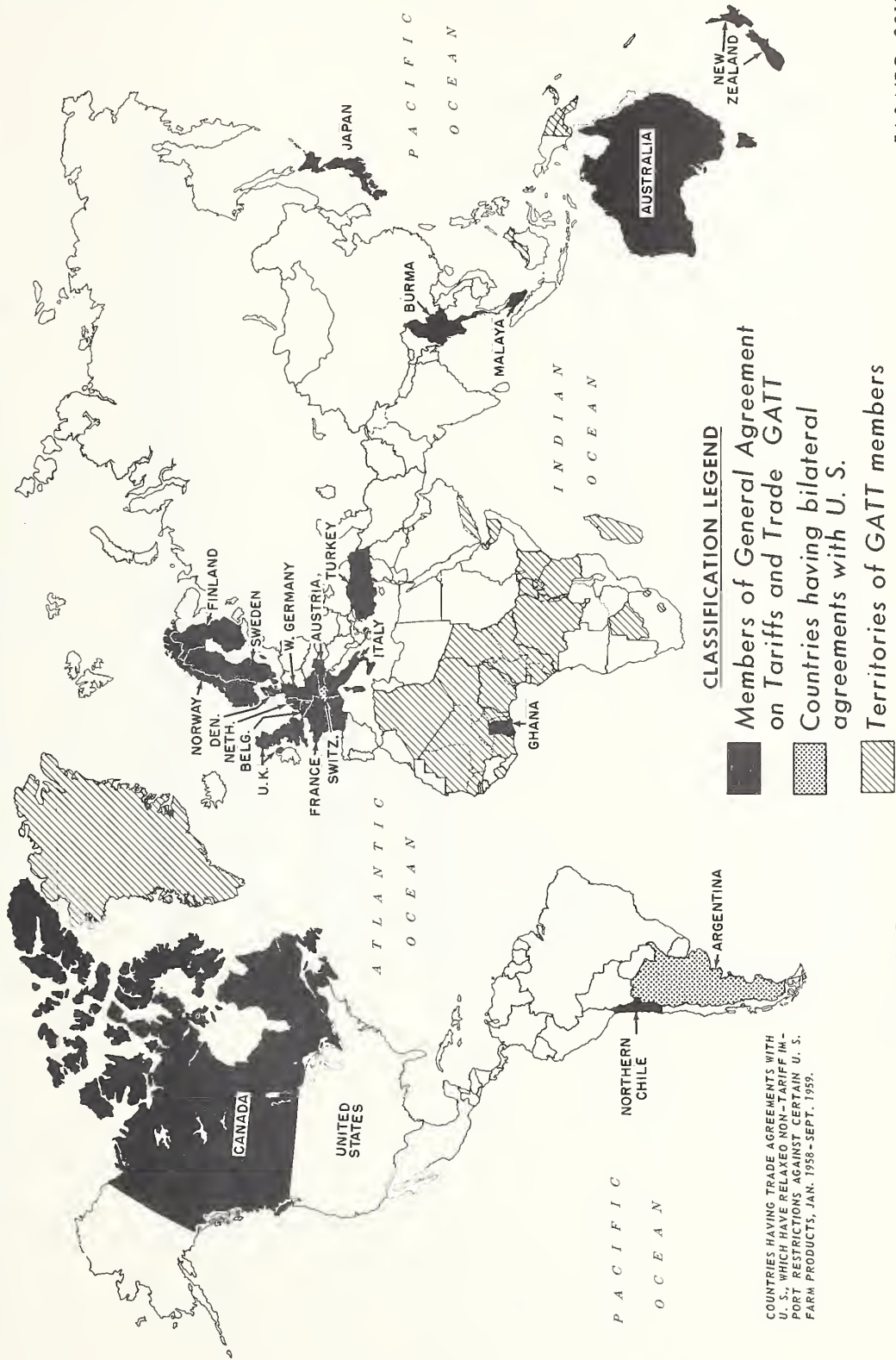
b. Western Germany - During the 1959 fiscal year, special consultations were also held with Western Germany, since Germany was no longer entitled, under the provisions of GATT, to maintain import restrictions for balance of payments reasons. The Federal Republic has from time to time proceeded by successive steps to reduce its number of import restrictions. In early January 1959, Germany placed 66 agricultural items on its liberalization list, the ones of most importance to American agriculture being seeds, meat products and fruits (in various forms). However, a number of agricultural products remain subject to import controls. These will receive continuing attention from FAS representatives during the next year.

c. Other Countries - Relaxation of quantitative restrictions has occurred in other GATT countries as a result of direct bilateral consultations initiated by the U. S. with the foreign country. One example is Canada, which after persistent prodding by the U. S., relaxed its embargo on turkeys and removed its restrictions on the importation of frozen peas.

38. European Common Market and Other Areas of Economic Integration: The movement toward regional economic integration has assumed a place of major importance in international economic developments. It can prove to be of great value to the U. S. and to all other trading nations through the creation of mass markets and the promotion of higher standards of living within the areas concerned.

An appraisal of regional economic integration by FAS representatives and officials of other Government agencies has been going on, and will be continued. The primary purpose of this appraisal is to be

22 COUNTRIES LIBERALIZE IMPORT CONTROLS OF U. S. FARM PRODUCTS





Many U. S. Farm Products Benefit From Relaxed Foreign Import Controls

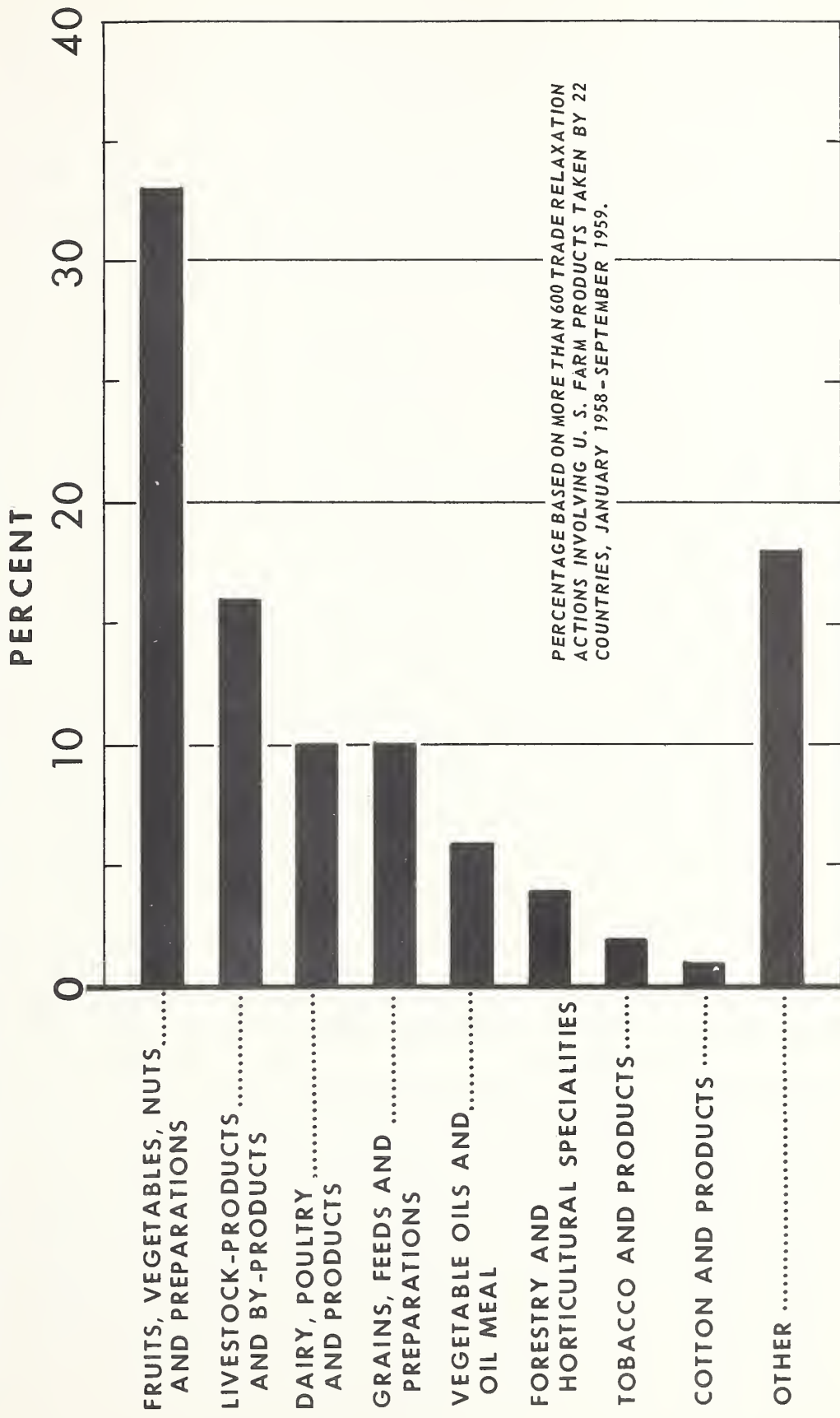


CHART NO. 6

USDA

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certain that the most effective instrument for insuring that the more mutually advantageous forms of regional association will materialize for the areas integrating economically, as well as for the U. S. and other third countries.

The treaty establishing the European Economic Community (frequently referred to as the Common Market) has been thus far the most conspicuous and significant example of economic integration (Italy, France, Western Germany, and the Benelux countries). The first major step toward carrying out the Common Market Treaty was taken on January 1, 1959. On that date, customs duties on intra-EEC trade were reduced by 10%, and each member country established special "global" quotas for imports from the other members. GATT countries, and other nations entitled to most-favored-nation treatment, were unilaterally granted the 10% tariff reduction on all commodities, except liberalized agricultural products, where the rate was above the proposed common external tariff rate of the EEC. In no case was the reduction to other countries permitted to lower the rate below the proposed Common Market rate.

Consultations were held during the past year with representatives of the Common Market area. Representatives from FAS participated in these consultations, constantly keeping in mind the probable impact on American agriculture of the formation of the Common Market.

Other areas planning on some form of economic integration are the so-called Outer-Seven (United Kingdom, Denmark, Norway, Sweden, Austria, Portugal and Switzerland); and Central American (El Salvador, Nicaragua, Costa Rica, Guatemala and Honduras). Several Latin American countries are considering the formation of a Common Market; in the Middle East the possible formation of an Arab common market is being considered.

AGRICULTURAL ATTACHES

1. Trade Liberalization

The Agricultural Attache activities on trade liberalization take two forms - actually securing reductions in the duties or revisions in the quantity or quality limitations currently in effect, such as were announced by United Kingdom, France and Denmark during the past year, or urging the foreign government not to issue proposed new and more restrictive regulations. This latter activity is a continuing one and also while less spectacular is at least as important as the former. For example, a number of countries have been revising their health and duty requirements for poultry meat, processed and semiprocessed foods and artificially colored fruits. The Agricultural Attaches in The Netherlands, Germany, Switzerland, Canada and Venezuela have been especially active in this phase of trade problems during the past year.

2. Market Development

- (a) Iran - After three years of steady, careful work in cooperation with American dairy interests, the Agricultural Attache has procured the support of the Iranian government and local trade officials in the establishment of a milk recombining plant utilizing American dairy products. An American-Iranian corporation has been established and commercial operations are expected to begin in late 1959.
- (b) Ecuador - At the specific request of a large group of Ecuadorian cattle buyers who visited the United States in May 1959 to make dollar purchases of livestock, the Agricultural Attache accompanied the group. The group made this request and assumed his transportation costs due to their confidence in his linguistic abilities and knowledge of American methods and techniques of livestock purchasing and transportation.
- (c) Central Europe - In the hard currency areas of Central Europe the Agricultural Attaches experimented with All-American food luncheons. In most every instance they solicited and obtained the active participation and financial support of American exporters of processed foods in this joint endeavor to acquaint influential citizens and buyers with American methods of preparing and serving such foods. The success of such an effort is now being appraised by the trade and the Agricultural Attaches.
- (d) Trade Fairs - Setting the stage for participation by United States agricultural trade interests in a specific food fair, assisting the exhibitors in their contacts with customs officials, fair officials and the viewing public, and picking up the many loose ends after the fair are unavoidably tasks of the Agricultural Attache offices. The increasing number of American exhibitors of United States foods in foreign fairs indicates the attaches' success in handling such matters and the growing demands of such services being placed upon Attache offices.

3. Public Relations

The Agricultural Attache's success in trade liberalization and market development are an integral part of his ability and time spent upon public relations. The traditional form of public relations is typified by:

- (a) The Attaches in Australia, New Zealand, Canada and the Union of South Africa have been planning and carrying on a series of speeches at public gatherings at the grass roots, as well as the university levels. These appearances with the support of local press and radio, have been most effective in explaining and defending American agricultural policies against local charges.
- (b) Another and less common type of public relations is typified by the Agricultural Attache in The Netherlands who not only performs the traditional duties of an Agricultural

representative in serving American trade and scientific needs, but also lends active support to the multiplicity of agricultural organization and trade groups who have Market Development activities in that country. These include association representatives of the poultry, wheat, cotton industries, and a major U. S. farm organization.

(c) Frequently public relations activities take strange and unusual form. For example, the regulations of the Commodity Exchange Act were not being complied with by several Swiss banking organizations who were dealing on the New York exchange. Repeated correspondence and negotiations with the Swiss Embassy in Washington were fruitless. In June 1959 the Agricultural Attache in Switzerland was requested to actively interject himself into the negotiations. In less than ten days the cooperation of the Swiss bankers was secured and the requirements of the Commodity Exchange Act complied with in spite of the fact that it had been previously alleged that such cooperation would be in violation of the Swiss banking laws.

(d) Another type of request illustrating special demands on the Agricultural Attache's technical knowledge and public relations ability was the request from the Defense Department for on-the-spot assistance in Beirut of the Regional Agricultural Attache stationed in Cairo, Egypt in settling claims against the United States as a result of the landing of U. S. troops in Lebanon. The Defense Department's appreciation for this assistance is summarized in Naval Secretary Gates' letter of January 19 to the Secretary of Agriculture in which he points out that the claimants not only made substantial reductions in their claims in recognition of the attache's professional knowledge, but went on to say "Also important is the fact that the claimants are, no doubt, better satisfied with his understanding method of handling their cases."

4. Reporting

(a) The Agricultural Attache offices continued during fiscal year 1959 to maintain a steady flow of information to keep U. S. agriculture informed of actual and potential developments in agricultural policies and programs in their countries of assignment. This was done by the preparation and submission of more than 1,100 scheduled reports, more than 3,000 voluntary reports, and a large number of letters, memoranda and cables. To collect, organize and verify this mass of information from both official and unofficial sources required much ingenuity and resourcefulness as well as extensive travel and personal contact with Government officials, producers, processors and trade representatives.

(b) Special reporting and services were performed in many instances by specific posts. For example, in Cuba the Attache, due to his unique knowledge of the political-economic situation in the rural areas and mastery of the local language, was called upon to make a

continuing appraisal through special reports on the impact of current Cuban political developments. This contribution to overall U. S. understanding is being continued throughout the period of major adjustment. Another example would be the regional Agricultural Attache posts in Africa, and especially the Liberian post, in reporting upon the political-economic situation in the rural areas of these underdeveloped countries who are rapidly moving toward national sovereignty. A third type of special reporting in which a number of attaches are participating is observing and assessing the degree and effect of the Sino-Russian penetration into free world agricultural trade.

5. In-Service Training

(a) Market development conferences of Agricultural Attaches, Washington officials, members of Congress and representatives of American agricultural trade groups were held in New Delhi in January and in Bogota in April of 1959 to explain and evaluate U. S. marketing policies, programs and procedures; to present and clarify marketing problems arising in countries to which attaches are assigned; and to exchange views on market development and trade promotion methods and techniques.

(b) Two training courses were held during the past year in Washington for a total of 12 local agriculturists employed in the Agricultural Attache offices. The most promising career employees in Europe, Africa, Asia and Latin America were selected for each course. These foreign national career employees were trained in the gathering and evaluation of agricultural information desired by American interests. They were introduced to U. S. agricultural policies, program objectives, production and processing informational needs and marketing support required to better serve American agriculture abroad.

(c) Personnel and facilities of the agricultural organizations and food exporters were coordinated with the regular training facilities available in the Department and in the Foreign Service Institute in training new Agricultural Attaches, Assistant Attaches and American secretaries being assigned to Attache posts abroad.

6. Foreign Currencies Used to Strengthen Attache Program:

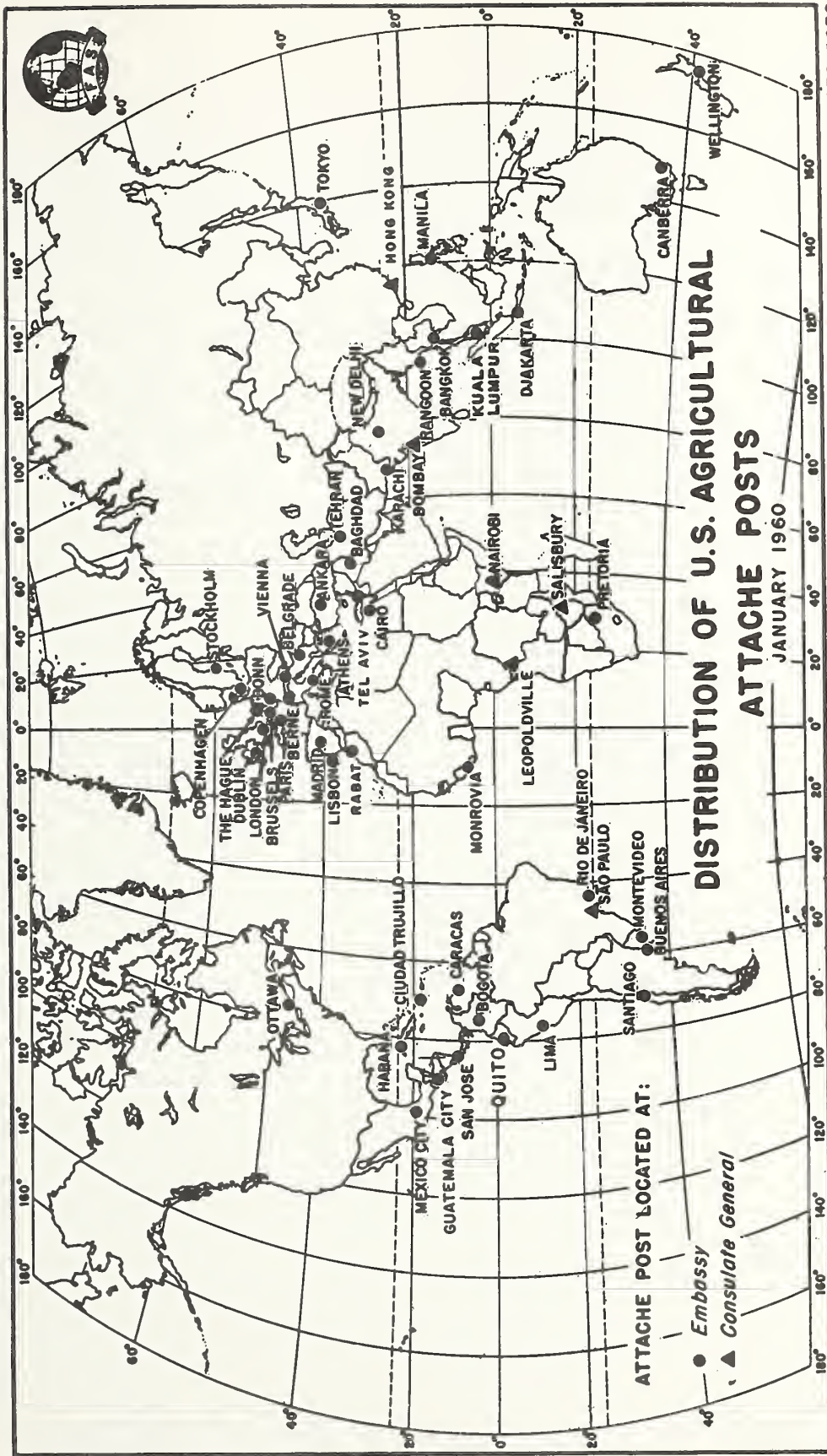
Beginning with the fiscal year 1959, the equivalent of approximately \$193,000 of currencies received from the sale of surplus agricultural commodities under P.L. 480 were used by FAS for such expenses as salaries of local employees engaged in regular attache activities, quarters and posts allowances for the American employees, leases and utilities for attache offices and for residences of American employees, and for some international travel. These local currencies were in addition to dollars appropriated for the attache program.

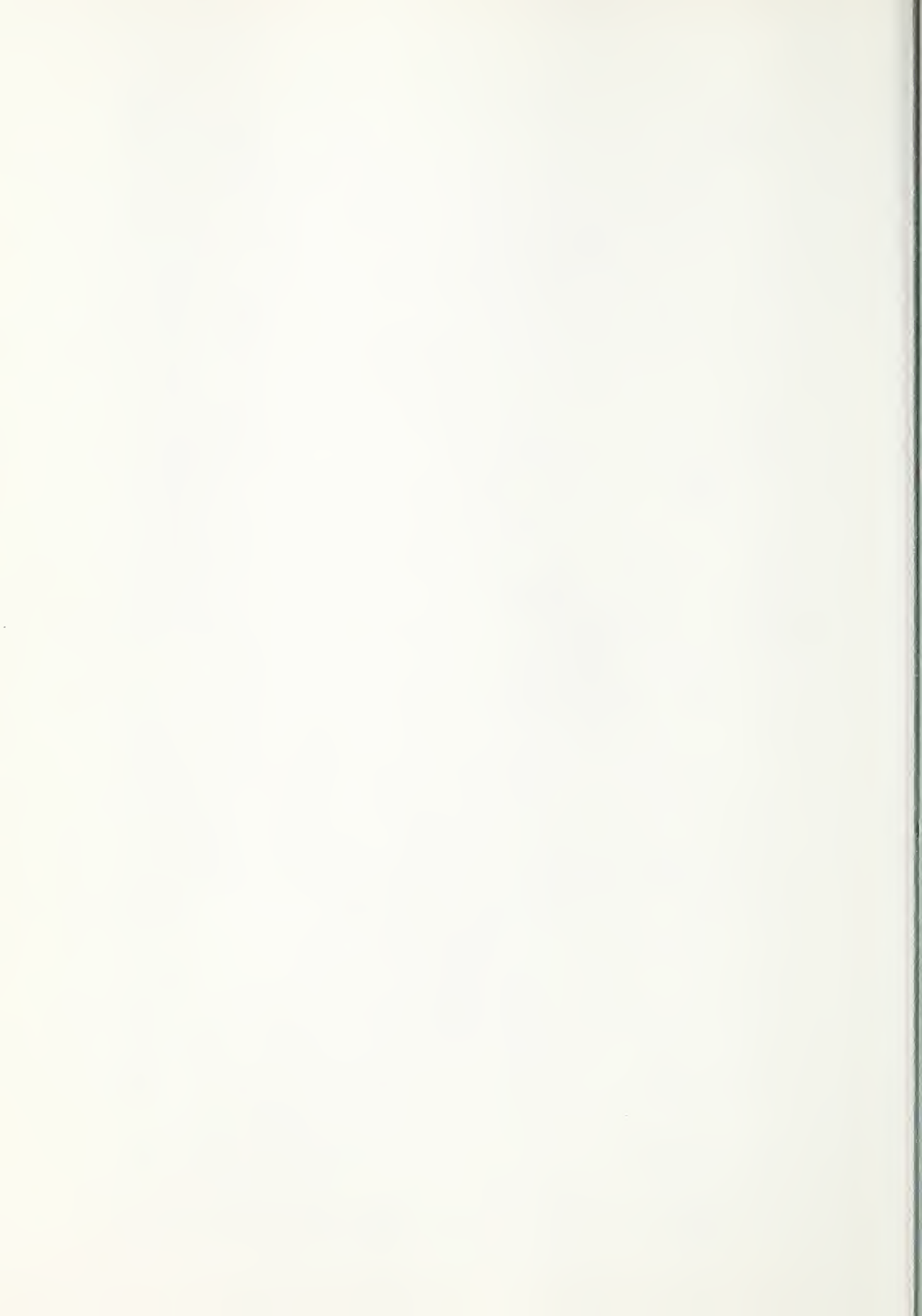
For the 1960 fiscal year, the Appropriation Act authorized, in lieu of dollars, the use of foreign currencies not to exceed the equivalent of \$1,310,000 for expenses of the attache service and for general

operating expenses of FAS in carrying out the purposes of section 104(a) of PL 480.

The world-wide distribution of U. S. Agricultural attache posts is shown on the following map.







FOREIGN MARKET PROMOTION

1. Technical Services in Marketing U. S. Cotton Abroad: FAS technical liaison service with foreign cotton buyers and processors is becoming increasingly important in demonstrating the superior properties of U. S. cotton. This trend is indicated by the growing demand for technical information and data on the spinning and weaving of cotton, the use of mechanical and chemical testing to determine quality, and the improved utilization of cotton in making new and better products. All segments of the industry in each country have demonstrated their interest in obtaining more scientific knowledge about the use of U. S. cotton for comparison with other growths. Periodic visits and consultations proved that the two-way effort is beneficial in the exchange of technical information and trouble shooting for better utilization of U. S. cotton. The FAS fiber technologist carried out technical liaison service in 12 Western European countries, visiting over 20 cotton mills, and consulting with textile schools, scientific personnel, textile machinery manufacturers, importers, and others interested in cotton and textile technology.
2. World Cotton Market and Price Analyses: Concurrent with the announcement of the cotton export program for 1959-60, arrangements were made to expand the price reporting service to include weekly reports by cable of prices at which U. S. cotton and equivalent qualities of all foreign growths are selling in 5 of the principal world markets. This information is analyzed and made available to Commodity Stabilization Service for use in the administration of the cotton export sales program. An FAS staff member serves on the special consultant committee appointed to advise the Secretary of Agriculture at regular intervals on the price of U.S. cotton compared with other growths.
3. Canadian Cotton Situation and Outlook: Typical of the analysis made of individual major export markets for U. S. cotton from time to time was an FAS report on the cotton situation and outlook in Canada. This report pointed out that the U. S. share of Canada's cotton import market is down because of a shift to lower-priced foreign growths. However, with prospects for lower prices of U. S. cotton for export next season and improving consumption prospects in Canada, the U. S. soon will return to its traditional position as a major supplier of raw cotton to Canada. Of interest to the U. S. textile and raw cotton industries is the FAS analysis of the increased cotton textile imports into Canada and the measures taken to regulate such imports.
4. World Cotton Supply and Demand Analyzed on Continuing Basis: The changing world cotton supply and demand situation is analyzed on a continuing basis to keep fully abreast of the foreign markets for U. S. cotton. Detailed statistics and information on cotton stocks, acreage, production, trade, and consumption are under constant surveillance throughout the year on a country by country basis. Analyses of such material in published and unpublished form provide U. S. cotton producers and the trade with current information on export markets and the outlook for as much as a year ahead. From

time to time separate reports were published giving an analysis of country by country information and statistics on (1) cotton acreage and production, crop conditions, policies of foreign governments that affect cotton production; and prospects and intentions of foreign production; (2) U. S. and world cotton export and import trade, factors affecting it, and U. S. cotton export programs as they relate to trade of other countries; and (3) stocks of raw cotton and factors affecting changes in stocks by countries.

5. U. S. Exports of Dairy Products Analyzed: All available data on U. S. trade in dairy products were compiled, analyzed, reorganized and presented in such a manner as to make possible a distinction between commercial exports and total shipments of such products. The data show total exports, including shipments under each of the various government programs, and exports exclusive of government programs. The latter breakdown indicates generally the size of commercial exports. Related breakdowns for each country of destination shows total exports including shipments for relief and charity and exports exclusive of government programs. Such presentation avoids confusion between bona-fide commercial trade in dairy products and total exports of such products.
6. World Per Capita Consumption of Dairy Products: In the past, the average per capita consumption of individual dairy products has been compiled for 17 of the world's major dairy product consuming countries. To achieve a greater degree of comparability of consumption estimates in this widely dispersed group of countries, the dairy products were converted to a whole milk equivalent, fat basis (the amount of milk required to produce a unit of product). This permits a direct comparison of rates of consumption in dairy surplus and deficit countries of the world. In the latest FAS circulars significant changes in per capita consumption of various dairy products in important countries were explained as a means of evaluating the long-term trends affecting these products.
7. Dairy Products Promoted in Burma: Encouragement in the consumption of dairy products, through recombining nonfat dry milk and anhydrous milk fat, was provided in Burma. A marketing specialist, using U. S. nonfat dry milk and anhydrous milk fat demonstrated the manufacture of recombined condensed milk, creating a great interest among Burmese Government and industry officials. Sweetened condensed milk is the principal dairy product consumed in Burma and practically all of it must be imported. The recombining process offers a means of increasing the per capita intake of milk and of conserving foreign exchange. If a recombined condensed milk industry can be established in Burma, it would offer an excellent opportunity to introduce recombined fluid milk, ice cream and many other dairy products that can be provided through this method.
8. Poultry Meat Exports Facilitated: A survey trip of a marketing specialist to Ghana resulted in U. S. frozen poultry entering this market for the first time. Both the Attache and trade have reported high acceptance of the U. S. product, and sales are expected to expand. Through industry and FAS effort, Switzerland continues to

expand as a major market for U. S. poultry. Exports to this country in 1958 amounted to 12.5 million pounds as compared with 7 million pounds in 1957 and 3 million pounds in 1956.

9. Markets Opened for Baby Chicks: Both the Governments of Colombia and Trinidad banned the importation of hatching eggs and chicks as a means of fostering the development of their own hatchery and poultry industry. The regulations were not only detrimental to the U. S. industry but also appeared unrealistic in obtaining the desired goal. As a result of visits of a marketing specialist to Colombia, authorities revised their regulations in accordance with suggestions made by the specialist, and baby chicks are now entering the country. The Government of Trinidad also lifted the import ban, and now good quality baby chicks and hatching eggs are admitted.
10. Egg Grading in Venezuela Interpreted: In 1958 Venezuela imposed restrictive import regulations, involving rigid grading and stamping requirements for shell eggs. The first proposed effective date of these regulations would have caused serious disruption of U. S. trade and would have been detrimental both to U. S. exporters and to Venezuelan importers. This situation was made known to the Venezuelan Government, and suggestions were made as to modification of the requirements. The requirements which went into effect do not impose as severe a handicap to U. S. exporters as those originally proposed. It was noted that several U. S. shipments of shell eggs were rejected because of inconsistent interpretation of the new regulations by the Venezuelan inspectors. Through a cooperative effort with FAS, a representative from AMS visited Venezuela to give instruction in grading techniques to the Venezuelan importers. The interpretation and grading techniques of the Venezuelan inspectors were made known to the U. S. exporters and a bilingual grading certificate was prepared.
11. Dairy Cattle Exports to South America: During a recent trip to South America, a livestock marketing specialist, in cooperation with the Agricultural Attache in Venezuela, suggested ideas for stimulating U. S. participation in an exposition to be held in April 1959. The marketing specialist contacted key people in the cattle industry upon his return to the United States. The direct result was that 24 U. S. breeders representing 7 breeds of purebred cattle attended the exposition and sold approximately \$320,000, FOB value, of U. S. breeding cattle.

As a result of a marketing specialist's visit to Colombia, the complete ban against importation of cattle was revised to permit importation of purebred sires.

12. Liberalization of Fruits: Further moves toward liberalization of trade in fruits and vegetables were made by certain countries during the year on the following commodities:

Denmark	- fresh citrus fruits;
West Germany	- single-strength citrus juices, and concentrated citrus juices in containers larger than 3 kilograms;

Norway	- fresh grapes, oranges, tangerines, and lemon juice;
United Kingdom	- fresh fruits except apples, pears, and citrus; nuts; fresh, canned and frozen vegetables;
Finland	- nuts and dried fruits, except raisins.

The United Kingdom, in addition to the liberalization described above, broadened competitive opportunities for U. S. fresh pears by including this fruit in Northern Hemisphere quotas, and increased dollar area import quotas for fresh citrus, canned deciduous fruits and dried fruits.

13. Increasing U. S. Rice Exports to Europe: Imports of U. S. rice into the United Kingdom for the period, August 1958 through July 1959, amounted to 444,000 cwt. as compared to only 34,000 for the same period last year. This tremendous increase resulted from the placing of rice on general license by the U.K. and promotional efforts of the U.S. rice industry as a follow-up to FAS rice exhibits at two successive food fairs.

Imports of U. S. rice into West Germany for the period August 1958 through July 1959 amounted to 1,116,000 cwt. compared to only 30,000 cwt. for a similar period in 1957-58. This substantial increase was the direct result of the successful efforts by FAS to have U.S. brown rice made eligible for dollar purchases.

14. World Grain Trade and U.S. Exports Under Government Programs Reported: A regular statistical report was published which summarized U. S. and world grain trade, primarily for the years 1956-57 and 1957-58. In addition, new sections were added which provided (1) import data based on arrival reports, and (2) a summary of U. S. grain exports by country destination 1954-55 through 1957-58, showing amounts financed under each of the various government export programs. The new sections have created wider interest in this publication. It is recognized as one of the few authoritative sources of international grain trade statistics.
15. Work Expanded in Discussing Merits of U. S. Wheat: Marketing Specialists traveled to nearly every corner of the globe in the past year talking U. S. wheat to end-users as well as importers and government officials. They have accomplished much in explaining U. S. grading standards and discussing with buyers how they can secure the qualities of U. S. wheat to meet particular needs. In some of these missions, marketing specialists have been accompanied and greatly assisted by representatives of both wheat producers' groups and the flour industry.
16. Carpet Wool Study: A study was completed on world production and availability of carpet wool. This work, carried out in cooperation with the U. S. Tariff Commission, was part of an investigation the Commission was conducting pursuant to Section 332 of the Tariff Act of 1930. This study resulted from a resolution adopted by the Senate Finance Committee on April 28, 1958, which directed the

Tariff Commission, with the cooperation of the Department of Agriculture, to make an investigation of wools imported into the United States for use in carpet and paper makers felt manufacture. U. S. agricultural attaches located in approximately 30 countries assisted FAS personnel in Washington in carrying out the various aspects of this investigation.

IMPORT CONTROLS

1. Investigations Conducted: Section 22 of the Agricultural Adjustment Act, as amended, is designed to protect agricultural programs from being materially interfered with by imports. During fiscal year 1959, preliminary investigations and related studies were conducted on 14 commodities, including rye, extra long staple cotton, cotton textiles, peanuts, almonds, walnuts, Finnish swiss cheese, Dutch edam and gouda cheese, New Zealand colby cheese, lemons, lamb and mutton, beef, honey, and broomcorn. Section 22 cases were prepared for presentation before the U. S. Tariff Commission on almonds, rye and extra long staple cotton.
2. Import Licenses Issued: Presidential Proclamations 3019 and 3025 issued in June 1953 under Section 22 of the Agricultural Adjustment Act, as amended, give the Department of Agriculture responsibility for apportioning imports and issuing import licenses for certain manufactured dairy products. During 1959 fiscal year, 1,792 licenses for imports of cheese were prepared, 106 transfers of country of origin were authorized, 348 changes in port of entry were approved, and about 60 petitions for relief from hardships were received and examined. In addition about 188 licenses for imports of manufactured dairy products other than cheese were issued. Under Presidential Proclamation 2550 issued on April 16, 1942, 31 licenses for imports of seed wheat were issued.



(b) Salaries and Expenses (Special Foreign Currency Program)

Allocations of foreign currencies, 1960 and base for 1961	\$5,843,378
Budget Estimate, 1961	<u>14,621,800</u>
Increase	<u>+8,778,422</u>

Note: The 1961 Budget Estimates include for the first time a proposal for the appropriation, "Salaries and expenses (Special foreign currency program), Foreign Agricultural Service," which would provide funds for the purchase of foreign currencies derived from sales under Title I of the Agricultural Trade Development and Assistance Act of 1954, as amended, (P.L. 480) for the purposes of market development (section 104(a)) and participation in agricultural and horticultural exhibitions (sec 104(m)).

Previously, the funds for these purposes have been derived as follows:

- a. Requests for allocations to use foreign currencies for the purposes of market development under section 104(a) have been reviewed and approved by the Bureau of the Budget.
- b. Allocations of foreign currencies for the purpose of participation in agricultural and horticultural exhibitions under section 104(m) were authorized in the Second Supplemental Appropriation Act, 1959 (P.L. 86-30), approved May 20, 1959.

The Project Statement which follows has been prepared on the basis of available funds and reflects obligations incurred in 1959 and estimated for 1960 and 1961.

SUMMARY OF INCREASES AND DECREASES, 1961
(On basis of available funds)

Increase for market development projects under section 104(a) of Public Law 480	+3,248,785
Decrease due to provision under regular appropriation of dollars to pay attache expenses paid from foreign currencies in 1960	-950,000
Decrease in participation in agricultural and horticultural exhibitions under section 104(m) of Public Law 480	-275,000

PROJECT STATEMENT
(On basis of available funds)

Project	1959	1960 (estimated)	Increase or decrease	1961 (estimated)
1. Market development projects (sec. 104(a)) ..	\$4,654,891	\$10,373,015	+\$3,248,785(1)	\$13,621,800
2. Agricultural attaches (sec. 104(a))	192,839	950,000	-950,000(2)	- -
3. Agricultural and horticultural exhibitions (sec. 104(m))	- -	1,275,000	-275,000(3)	1,000,000
Total obligations or estimate a/	4,847,730	12,598,015	+2,023,785	14,621,800
Unobligated balance brought forward	-6,441,148	-6,799,481		
Recovery of prior year obligations	-25,307	- -		
Unobligated balance carried forward	6,799,481	- -		
Unobligated balance no longer available	- -	44,844		
Authorization to expend foreign currency receipts	-5,493,829	-5,843,378		
Adjustment due to changes in exchange rates	313,073	- -		
Total appropriation	- -	b/		

Note: In addition, obligations were incurred or are estimated for the travel of U. S. Agricultural specialists abroad, from foreign currencies allocated by the Budget Bureau under Section 104(f), as follows: 1959, \$54,236; 1960, \$65,764.

a/ Applied costs comparable to total obligations are \$5,638,539 in 1959, \$8,488,609 in 1960, and \$11,830,800 in 1961. The difference between cost and obligations in 1959 is due to an excess of services received over obligations incurred. In 1960 and 1961 the differences between costs and obligations are due to the excess of foreign currency contracts made over work completed in each year.

b/ An appropriation is recommended for 1960 equal to the dollar value of unexpended balances of previous foreign currency allocations under sections 104(a) and (m) as of June 30, 1960, as indicated below under "Explanation of Language."

INCREASES AND DECREASES

(1) An increase in obligations under sec. 104(a) of \$3,248,785 for the activity "Market Development Projects".

The increase results from (1), putting market development projects on a 3-year basis, that is, agreements will be entered into with industry cooperators and funds obligated for a 3-year period instead of for 2 years, as has been the practice; (2), the expansion of market development work in some countries where the market development efforts up to now have been limited; and (3), extension of the market development program to several new countries. It is expected that all of the cotton projects will be for 3 years, and on a more limited basis the projects for grain and feed, fats and oils, dairy and poultry, and tobacco will cover a 3-year period. This will increase the effectiveness of the market development work since it will assure continuity and permit more adequate planning of the projects by FAS and the U. S. and foreign cooperators.

A brief discussion of the increase by types of commodities and functions follows. Further details on activities to date are included in the "Status of Program" section.

- a. Cotton Promotion. Activities in all of the countries involve a broad program to promote increased cotton consumption through market research, sales promotion and general publicity activities. Funds for regional supervisory projects to develop and direct country programs have been provided for 34 countries through fiscal year 1960. It is planned to add funds to 30 of these countries in fiscal year 1961. These projects are designed primarily to direct promotional programs through the payment of supervisory and other expenses. Promotional programs in co-operation with industry groups have been planned for and will continue in 21 countries. Additional funds are required for the continuation of existing country programs and for 8 new country programs planned to be added in 1961 in Burma, Chile, Greece, Pakistan, Peru, Thailand, Turkey, and Korea.
- b. Dairy and Poultry Promotion. Cooperative promotion activities are presently being undertaken or planned in 28 countries. Dairy promotion is carried out principally through efforts to increase milk and dairy consumption, the supplying of livestock specialists for dairy breeding cattle, and product development. For fiscal year 1961, additional funds will be required for 17 of these countries and for the following new countries: Belgium, Ceylon, Egypt, Indonesia, the Philippines, Portugal, and the United Kingdom.
- c. Fats and Oils Promotion. Two general types of project activities are carried out - marketing assistance and intensive promotion campaigns, with emphasis on the latter. Cooperative promotional activities for soybeans and soybean products have been undertaken or planned in 38 countries. For fiscal year 1961, additional funds are needed in 28 of these countries and in Indonesia, Lebanon, Thailand, and the United Kingdom.

- d. Fruit Promotion. Cooperative projects with U. S. industry groups are presently planned in 13 countries. Marketing surveys, preparation and distribution of promotional literature, promotional advertising, and market reporting are the bases for promotional work abroad. Additional funds are required in 7 of these countries for fiscal year 1961 and for new work in Finland and Norway.
- e. Grain and Feed Promotion. Projects have been undertaken or planned in 39 countries to promote increased consumption and U. S. exports of wheat and wheat products, feed grains, seed, rice, and beans through a wide variety of promotional activities. These will continue in fiscal year 1961 with new funds required for all countries. In addition, funds will be required to undertake work in 11 new countries: Bolivia, Costa Rica, the Dominican Republic, Ghana, Indonesia, Panama, the Sudan, the Union of South Africa, Uruguay, Nicaragua, and Nigeria.
- f. Livestock and Meat Promotion. Promotional activities have been undertaken or are planned in 23 countries to date for tallow, lard, breeding stock, and hides and skins. Project activities include market studies and analyses, exchanges of trade personnel and the promotion of increased soap consumption. New funds for fiscal year 1961 will be required in 15 of these countries and for 10 new countries: Denmark, the Dominican Republic, Guatemala, Honduras, Panama, the Philippines, Sweden, the Union of South Africa, the United Kingdom, and Yugoslavia.
- g. Tobacco Promotion. Two types of project activities are carried out - marketing research and surveys, and intensive promotional campaigns. Work is being performed to date in 17 countries. For fiscal year 1961, additional funds will be required for 6 of these countries.
- h. International Trade Fairs. 1961 requirements are expected to be the same as in 1960, with plans for trade fair participation and related activities in 13 countries: Belgium, Burma, Columbia, Ecuador, West Germany, Greece, India, Indonesia, Italy, Peru, Poland, Spain, and Yugoslavia.
- i. Other promotional Activities. Marketing studies and analyses, personnel exchanges, and long range studies of supply and demand have been carried out in fiscal year 1960 and are proposed for continuation in the fiscal year 1961.

(2) A decrease in obligations of \$950,000 due to provisions under the regular appropriation of dollars to pay attache expenses which were paid from foreign currencies in 1960.

The 1960 Appropriation Act provided the equivalent of \$1,310,000 in foreign currencies for the expenses of the Foreign Agricultural Service. Of this amount, \$950,000 is being used in the 1960 fiscal year in support of the Agricultural Attaches in foreign countries. The remaining \$360,000 is being used for general operating expenses of the market development program.

For the 1961 fiscal year, it is proposed to include the \$950,000 in the regular dollar appropriation instead of providing it by means of an authorization to use foreign currencies. This grew out of the budget proposal to provide separate dollar appropriations for the purchase of foreign currencies for Section 104 uses, and to limit these separate foreign currency appropriations to programs authorized by Section 104 of P. L. 480. Dollars will provide greater flexibility than the use of foreign currencies since it is not always practicable to use a particular currency at a particular time. Some foreign currencies are obtained by conversion. Waiting for conversion creates problems, resulting in disruption of the Attache activities. The use of dollars for the Attaches will overcome these kinds of operating problems.

The decrease of \$950,000 for 1961 merely reflects the inclusion under the regular appropriation of dollars to pay attache costs which were paid from foreign currencies in 1960.

(3) A decrease in obligations under sec. 104(m) of \$275,000 for the activity "Agricultural and Horticultural Exhibitions".

Although there probably will be more agricultural and horticultural exhibitions in 1961 than there were in 1960, the total cost of the program is expected to be somewhat lower. It is not possible at this time to list the fairs, but experience indicates that the Department will be called upon to participate in those which will most effectively advance the interests of the United States. It is expected that these exhibitions may be set up in such countries as Burma, India, Indonesia, Pakistan, Israel, United Arab Republic, Poland and Yugoslavia.

The main purpose of these exhibitions will be to sell ideas, but they will also have other advantages. For example, they will complement the market development work by improving the world wide appreciation of American agriculture and its products. Some of the countries in which the exhibitions will be put on have such limited dollar resources that market development projects have not been started. However, it is possible that some of these countries could develop into dollar markets and it is desirable that U. S. Agriculture be as well known as possible.

These exhibitions depict various aspects of American agriculture and horticulture in its broadest sense -- how farm people live and work; nature of an American farm, its buildings, its equipment, its livestock; the marketing of U. S. farm products; the processing of these products; and, finally, their distribution to the consumer. They include, where appropriate, a depicting of the rural culture -- the types of organizations to which farmers belong and the contribution of these organizations to rural welfare. Horticultural aspects may also be included.

EXPLANATION OF LANGUAGE

The estimates include new appropriation language as follows:

- 1 For purchase of foreign currencies which accrue under title I of the Agricultural Trade Development and Assistance Act of 1954, as amended (7 U.S.C. 1704), for the purposes of market development activities under section 104(a) of that Act, \$13,621,800, and for the purposes of section 104(m) of that Act, relating to agricultural and horticultural fair participation and related activities, \$1,000,000, to remain available until expended,
- 2 of which amounts not less than \$4,400,000 shall be available to purchase currencies which the Treasury Department shall determine to be excess to normal requirements of the United States:
- 3 Provided, That this appropriation shall not be used for the purchase of currencies available in the Treasury for the purposes of section 104(f) of such Act unless such currencies are excess to the normal requirements of the United States:
- 4 Provided further, That the dollar value of the unexpended balances, as of June 30, 1960, of allocations of foreign currencies heretofore made available to the Foreign Agricultural Service for the foregoing purposes of such sections 104(a) and (m) is appropriated as of that date and shall be merged with this appropriation.

This language provides an appropriation for the purchase of foreign currencies to carry out market development activities under Sec. 104(a), and agricultural and horticultural exhibitions under Sec. 104(m). The four major provisions of the new language are indicated below:

1. The first portion of the language provides for appropriation of dollars to purchase foreign currencies which accrue under Title I of the Agricultural Trade Development and Assistance Act of 1954, as amended (P.L. 480). The dollars will be credited to the Commodity Credit Corporation to offset, in part, its costs of financing P. L. 480 shipments. The amounts requested by major activity are as follows:

Market development (sec. 104(a))	\$13,621,800
Agricultural and horticultural exhibitions ..	\$1,000,000

Since funds are intended primarily for contracts with U. S. co-operators in foreign countries and it is possible that final details of negotiations on some contracts might not be completed by June 30, the proposed language provides that the funds would remain available until expended. Inability to complete agreements which might be in final stages of negotiation would be embarrassing and might jeopardize negotiations on further lines of work.

Foreign currencies previously utilized by the Foreign Agricultural Service were obtained by allocations from the Budget Bureau to expend from foreign currency receipts or as Congressional

authorizations to the Foreign Agricultural Service included within appropriation language under the item, "Salaries and expenses." The new language in effect supersedes appropriation language proposed for deletion in 1961 from the appropriation item "Salaries and expenses, Foreign Agricultural Service."

2. The language provides that not less than \$4,400,000 of the total estimate must be used only to purchase currencies which the Treasury Department determines to be excess to normal requirements of the United States. The 1961 Budget Estimates assume that six countries are in this excess category--Egypt, India, Israel, Pakistan, Poland, and Yugoslavia. During 1961 and future years, actual excess currency countries will be designated by the Treasury Department.

The minimum of \$4,400,000 on the use of excess currencies is distributed by country as follows:

<u>Country</u>	<u>Amount</u>
Egypt	\$537,000
India	1,607,100
Israel	590,000
Pakistan	940,300
Poland	260,000
Yugoslavia	<u>465,600</u>
Total	4,400,000

3. The language provides that none of the appropriation may be used to purchase currencies under section 104(f) unless they are excess to normal requirements of the United States. Section 104(f) currencies are available to pay any United States obligation abroad. This provision prohibits the use of such currencies for paying obligations under section 104(a) in any country where they are not available in excess of "normal" U. S. requirements as determined by the Treasury Department. The purchase of section 104(f) funds for the general purposes of the Foreign Agricultural Service under this appropriation is not authorized, but regular "Salaries and expenses" dollar funds may be so used.
4. Finally, the language provides that the dollar value of unexpended balances, as of June 30, 1960, of foreign currency allocations made prior to that time would be merged with this appropriation as of that date. This would simplify the program and accounting records by providing for the use of dollars to purchase all foreign currencies expended under Sections 104(a) and (m) in 1961 and future years. The unexpended balance to be transferred is presently estimated at \$9.3 million.



STATUS OF PROGRAM

Since 1961 is the first year for which a Congressional appropriation is being requested for purchase of foreign currencies to carry out market development projects, there follows an explanation of the legislative authority for these projects, the objective to be accomplished, the types of projects, the amounts of foreign currencies obligated or authorized for market development projects, and the plan of work and accomplishments under each of the different commodities.

In addition to use of foreign currencies by the Foreign Agricultural Service for foreign market development projects under Section 104(a) of Public Law 480, the Agricultural Research Service has instituted a program of utilization research abroad under Section 104(a) which is expected to lead to the development of new uses for U. S. agricultural commodities and to aid in the expansion of export markets.

1. Legislative Authority: Title I of Public Law 480 authorizes the President to enter into agreements with friendly nations providing for the sale of surplus commodities for foreign currencies. The President is authorized to use, in agreement with the country concerned, foreign currencies accruing from sales for various purposes.
2. Objective: The objective of market development projects conducted with foreign currencies is to maintain and expand existing foreign markets or to develop entirely new foreign markets for United States agricultural commodities.

To the extent practicable, the Foreign Agricultural Service enters into agreements with trade groups, both U. S. and foreign, for the operation of these projects. However, this will be done only if the trade group will make a significant financial contribution. If a trade group is unable or unwilling to undertake a needed project, it may be carried out directly by the Foreign Agricultural Service.

The Department contributes foreign currencies and overall guidance, including assistance by the Agricultural Attache Services abroad. The cooperator carries out the work, either directly or in cooperation with foreign groups. In all projects, however, U. S. trade and agricultural groups cooperate directly or indirectly, to the maximum extent possible.

3. Types of Projects: A wide variety of market development projects is underway or planned with emphasis on the following:
 - a. Market Surveys--This type of project is designed to determine potential demand for specific agricultural commodities and how this demand may be developed and supplied.
 - b. Nutrition Education--These activities improve the health and welfare of people abroad and at the same time expand the market for agricultural commodities that can be supplied by the United States.

- c. Two-way Visits--Visits of foreigners to the United States and visits of United States citizens to foreign countries improve trade relations. The exchange of ideas and information in this manner is expected to result in greater consumption of United States agricultural commodities.
 - d. Promotion and Advertising--United States advertising and sales techniques are being used abroad with appropriate variations to meet local conditions.
 - e. Demonstrations--This market development technique is used to demonstrate types, varieties, grades, and classes of United States agricultural commodities available for export.
 - f. Trade Fairs and Exhibits--Market development projects are also conducted through participation in international trade and food fairs. The United States participates in two kinds of fairs: One is the diversified fair of a largely industrial type; the other is the food fair, which is devoted exclusively to food items. Exhibits are planned where the greatest number of potential buyers of agricultural products are expected to congregate.
 - g. Comprehensive Economic Studies--While cooperator projects including trade fairs have been emphasized, a new type of activity has been undertaken which has increased activities in the non-cooperator area. Comprehensive economic studies for selected countries are being contracted for by the Foreign Agricultural Service to guide long-range market development efforts abroad.
4. Accomplishments Under Market Development: Following are explanations of the commodities involved, international trade fairs, and other projects and activities to be carried out under market development projects for which funds are requested in the fiscal year 1961.
- a. Cotton Promotion--Two types of projects are being carried out in cooperation with the Cotton Council International: A regional supervisory project to develop and direct country programs, and individual country projects in cooperation with foreign industry groups.

Under the supervisory projects funds have been provided for 34 countries through fiscal year 1960. These projects are designed primarily to direct promotional programs in cooperation with foreign industry organizations through the payment of supervisory costs, office expenses abroad, printing and distribution, travel, personnel training costs, costs of meetings and conferences of industry groups, and the production of photographic and motion picture program material.

Promotional programs in cooperation with industry groups have been planned for and will continue in 21 countries.

Activities in all of the countries involve a broad program to promote increased cotton consumption through market research, sales promotion, and general publicity activities. Market research provides the information on the "how," "when," "where," and "what kind," of cotton products consumers are buying, facts about the competition from other fibers, and guides the promotion and public relation efforts to expand cotton consumption. Coordinated publicity programs are bringing about a revival of interest and enthusiasm in processing, distributing, and using cotton products. The story of cotton is being told through all available media -- newspapers, magazines, motion pictures, radio, TV, fashion events, and every-day sales promotion by manufacturers and retail stores. Special programs are conducted to train retail sales personnel. Special Cotton Weeks are held in most of the countries. An estimated one-half of the population of Japan witnessed the Cotton Week program and store exhibits in 1958. Over 10,000 retail stores have participated in Cotton Weeks in Belgium.

Cotton promotional programs, aimed at increased consumption, are necessarily long-range in nature and must be continued to achieve lasting results. In each of the 14 countries where promotional programs have been undertaken, per capita cotton consumption has increased for the calendar years 1955 through 1957, the last year for which such statistics are available. Greatest increases have been in Belgium, France, Japan, the Netherlands, and Switzerland.

- b. Dairy and Poultry Promotion--Promotional activities have been undertaken or planned in 28 countries in cooperation with the Dairy Society International, the American Guernsey Cattle Club, and the Brown Swiss Cattle Breeders Association, the Holstein-Friesian Association of America, the Purebred Dairy Cattle Association, and the Institute of American Poultry Industries.

Dairy promotion is carried out principally through efforts to increase milk and dairy product consumption, the supplying of livestock specialists for dairy breeding cattle, and product development. Projects to increase milk consumption usually center around recombining operations, including trade fair demonstrations. Techniques used are aimed at consumers and include: sample distribution of recombined milk and dairy products utilizing U. S. nonfat dry milk and anhydrous milk fat; nutritional education; and advertising through press, radio, newspapers, posters, brochures, and leaflets. Dairy cattle projects provide U. S. specialists to other countries to judge shows, explain U. S. breed characteristics and advantages, assist in herd improvement methods, and to establish sales contacts. For product development, a project is now underway to find new ways of utilizing milk products in combination with local food-stuffs which are in abundant and inexpensive supply. Included also are market testing and commercial application for such products developed, using milk products in the various forms in which they are available for export from the U. S.

Poultry promotion is carried out through the use of techniques aimed mainly at the consumer as follows: market research on utilization and consumer preference; event promotions such as Easter, Poultry Day, or Poultry Month; use demonstrations and consumer education; sales training at wholesale and retail levels; and participation in trade fairs. In addition, advertising is carried out in newspapers and trade journals and promotional leaflets.

In addition to improved trade relations and trade contacts, specific project results have been achieved. In Thailand, a new U. S. market has been created for approximately 300,000 pounds of nonfat dry milk and 100,000 pounds of anhydrous milk fat annually. Breeding cattle promotion in Peru was responsible for sales of over 400 head of U. S. dairy cattle from the beginning of this program in that country through 1958. In West Germany, promotional activities were largely responsible for the issue of import licenses for U. S. poultry of over 2 million pounds, with U. S. poultry exports to Germany increasing from 4.4 million pounds in 1956 to over 6.0 million pounds for the first 5 months of 1959. Comparative poultry exports for the Netherlands and Switzerland increased from 0.1 and 2.9 million pounds to 1.0 and 6.8 million pounds respectively.

- c. Fats and Oils Promotion--Promotional activities for soybeans and soybean products have been undertaken or planned in 38 countries to date in cooperation with the American Soybean Association and the Soybean Council of America. Two general types of project activities are carried out--marketing assistance, and intensive promotional campaigns.

Marketing assistance facilitates U. S. exports through assistance to foreign importers, processors, and wholesale and retail trade on technical and marketing problems. Such assistance includes information and training on quality determination, quality control, storing, grading, processing, and similar aids. Exchanges of trade personnel have also helped in this area.

While marketing assistance is provided to all areas, intensive promotional activities are limited to principal markets. Emphasis has been placed upon increasing both industrial and consumer uses through the following techniques: consumer education, particularly nutritional; advertising campaigns; product samples and introduction; and advertising through press, magazines, radio, television, and visual aids. Educational film has been prepared as a project activity for use as a promotional aid.

While results of these projects in terms of increased U. S. exports of soybeans and soybean products are of necessity long-range and hard to identify, some results have been indicated. There is greater emphasis upon the use of soybean products for better nutrition in Japan as a result of work in that country. Improved processing and quality of products has been achieved in Spain and Italy. Finally, U. S. trade and agricultural groups have

been brought into closer contact with similar groups abroad.

- d. Fruit Promotion--FAS has cooperated with the California Prune Advisory Board, the California Raisin Advisory Board, the Cling Peach Advisory Board, and the Florida Citrus Commission in market development projects and planned projects in 13 countries to date. Marketing surveys, the preparation and distribution of promotional literature, promotional advertising, and market reporting are the basis for promotional work abroad.

Market surveys and promotional advertising have been undertaken in Europe, especially in West Germany, by the four U. S. fruit trade groups in cooperation with the Department of Agriculture. Newspaper advertising tied in with consumer buying research promoted California prunes and raisins in West Germany. A survey in Europe shows considerable opportunity for sales of cling peaches.

As economic conditions improve, opportunities arise to sell American fruit abroad. To help U. S. exporters seize such opportunities, the Department and the fruit trade distributed an attractive 48-page booklet as a promotional aid. This brochure, printed in full color and distributed in fruit importing countries, describes and illustrates available fresh, dried, and canned fruits, as well as tree nuts. Demand for the brochure has been heavy and it has proved to be a very valuable promotional tool.

Activities carried out have assisted in maintaining the U. S. position in the European fruit markets, our most important export market accounting for exports of over \$90 million per year. In addition, promotional activities were largely responsible for removing the prohibition against imports of U. S. prune juice into West Germany.

- e. Grain and Feed Promotion--Projects have been undertaken or are planned in 39 countries to promote increased consumption and U.S. exports of wheat and wheat products, feed grains, seed, rice, and beans.

Principal promotional efforts to date have been devoted to wheat and wheat products in cooperation with the Oregon Wheat Growers' League, the Nebraska Wheat Growers' Association, the Washington Association of Wheat Growers and the Millers' National Federation. U. S. cooperator representatives are stationed abroad to cover three work areas: Europe, the Far East, and Latin America. Promotional activities include nutritional education, exhibits, exchanges of trade personnel, preparation, translation and distribution of promotional material, film production, marketing and demand studies, school luncheon systems, cooking demonstrations, bakers' training, and advertising through press, radio and newspapers, and trade journals.

Promotional efforts for feed grain, seed, rice, and beans are of more recent origin and of a more limited scope. A regional feed grain project for Europe in cooperation with the Grain Sorghum Producers Association has recently gotten underway under which limited promotional activities will be undertaken such as

promotion of better feeding practices; assistance to foreign buyers, importers and processors; translation, printing and distribution of promotional and educational materials; and feed grain exhibits. Marketing surveys for seed with the Oregon Seed Council and Pacific Seed Export Market Institute have resulted in better trade contacts and plans for the supply of samples to principal foreign markets. For rice, marketing studies in cooperation with the U. S. Rice Export Development Association and the collection of samples have been undertaken on a global basis to provide complete export market information to the U. S. rice trade. Promotional work for beans with the Western Bean Dealers has been limited to marketing surveys, exhibits, distribution, and establishment of trade contacts.

Continued promotional efforts are expected to both increase consumption and U. S. export of these commodities. Specific results for wheat and wheat products to which promotional projects have contributed include decisions on the part of the Portuguese Government to upgrade the quality of bread sold throughout Portugal requiring larger amounts of imported hard wheats to blend with their domestic soft wheats, and to import an additional 40,000 tons of U. S. wheat this year; the re-entry of U. S. flour exports to Angola; and increase of more than 20 percent in Japanese bread consumption; and research in Guatemala which indicates that lysine can be added to flour in the milling process to improve human nutrition. Bean promotion resulted in the sale of 50 tons of beans in Peru and the establishment of permanent trade contacts.

- f. Livestock and Meat Promotion--Promotional activities have been undertaken or are planned in 23 countries to date for tallow, lard, breeding stock and hides and skins.

Tallow promotion, in cooperation with the National Renderers' Association, has been concentrated in Japan, our most important tallow market. Continuing project activities include: market studies and analyses; exchanges of trade personnel; and the promotion of increased soap consumption. Promotional devices used include contests, posters, and advertising through radio, TV, newspapers, magazines, film slides, and advertising cars. In addition, a tallow film has been made for showing in major export markets as a promotional aid.

In cooperation with the American Meat Institute, marketing surveys and other promotional activities for lard have been undertaken. Main promotional activities were undertaken in West Germany to increase lard consumption, particularly of U. S. high quality lard. Emphasis was placed upon "brand lard" from the U. S. under an intensive advertising campaign aimed at the consumer.

Livestock specialists are being sent abroad under a cooperative program with various U. S. livestock breed associations. Other livestock specialists are being provided under cooperative arrangements with foreign agricultural groups. FAS funds are used

to pay transportation costs for specialists provided by the cooperating groups in the U. S. The cooperating groups abroad provide local transportation and other project costs. Livestock specialists judge shows abroad, explain U. S. breed characteristics and advantages, and provide the point of contact for export sales of U. S. breeding stock.

Efforts to promote exports of hides and skins, in cooperation with the American National Cattlemen's Association, the National Hide Association, the National Independent Meat Packers' Association, and the Western States Meat Packers' Association, have thus far been devoted primarily to market studies and the development of trade contacts.

Specific project results to date include: improved quality of tallow exports to Japan resulting in elimination of claims against U. S. tallow shipments and a consequent 22 percent increase of such exports; sale of 100 head of breeding swine to Chile; sale of 100 head of sheep to Peru; improved "quality consciousness" for lard by the German consumer; and improved relations between U. S. and foreign hides and skins traders.

- g. Tobacco Promotion--Cooperative projects have been entered into with the Burley and Dark Leaf Export Association, the Leaf Tobacco Exporters' Association, and Tobacco Associates for work in 17 countries to date. Two types of project activities are carried out--marketing research and surveys, and intensive promotional campaigns.

Marketing research and surveys serve two purposes: (1) to ascertain promotional possibilities, and (2) to provide needed trade information such as consumer preference, market information, and trade organization and structure and preference. Exchanges of trade personnel and information have been included in these project activities.

Promotional efforts are concentrated in 3 countries offering best opportunities: France, Japan, and Thailand. For each country, U. S. cooperators work with the tobacco monopoly concerned in carrying out intensive promotional campaigns using the following techniques: exchanges of trade personnel and information; "brand" promotion of cigarettes containing U. S. leaf; and the improvement of tobacco handling, blending, and processing to produce a better cigarette. "Brand" promotion is carried out through contests; advertising, by radio, news media, trade journals, and posters; and other direct consumer appeals.

Specific results to which promotional activities have contributed include: an increase from 12 million pieces to 26 million pieces monthly for "Royale" cigarette sales in France, cigarettes containing 65 percent U. S. leaf; a sales increase from 7.8 to 10.5 billion pieces of "Peace" cigarettes in Japan, the leader among American-type cigarettes containing U. S. leaf; and an increase

from 7 million pieces to 14 million pieces monthly for "Gold City" cigarette sales in Thailand, a brand containing 100 percent U. S. leaf.

- h. International Trade Fairs--Under international trade fair activities, FAS organizes and manages exhibits, provides space, furnishes supplies and equipment, and pays travel and other necessary costs. U. S. trade, agricultural, and industry groups participate by supplying exhibit ideas and materials and technical personnel to man exhibits and carry out other promotional activities in connection with displays. Through taking part in 41 international exhibits through fiscal year 1959, FAS and participating U. S. groups have made direct promotional contacts with some 21 million tradesmen and consumers abroad. In 1960 FAS expects to participate in 14 fairs.

Trade fair exhibits serve both to promote commodities by displays or demonstrations and as an operational base from which participating U. S. trade groups may undertake additional promotional or sales activities. Dairy industry leaders in the country, for example, are invited to the exhibit for a special processing demonstration. It is held in a complete dairy plant set up within the exhibit to produce milk and ice cream from nonfat dry milk solids and anhydrous butterfat.

Samples of U. S. farm products are distributed as a feature of these exhibits. Products sampled include recombined milk, ice cream, and cheese; citrus juices; doughnuts, bread, and pastries from U. S. wheat flour; and cigarettes containing U. S. tobacco. This gives many people abroad their first opportunity to taste American food products.

- i. Other Projects and Activities--FAS undertakes projects directly in cases where the work is considered desirable and where it is impracticable to operate the project on a cooperative basis through a private trade group or institution. When ever the work can be done more effectively or more economically, the projects are carried out through contracts with U. S. or foreign organizations. In cases where FAS operates a project directly, interested trade groups are consulted and informed of results.

Principal types of FAS projects which are being carried out include: marketing studies and analyses; personnel exchanges; and long-range studies of supply and demand. This latter category accounts for most of the amount requested for these projects.

Long-range studies of supply and demand underway or planned are comprehensive economic studies which include consumer preference for food, fiber, and tobacco; food consumption patterns at different income levels; and long-term projections of supply and demand for agricultural commodities with particular emphasis on the types available for export from the U. S. Work is generally contracted out to qualified firms operating in the countries in which work is undertaken. Results of these studies

are expected to assist in the development of foreign markets and to serve as the basis for planning future promotional work.

5. Financing: Foreign currencies obligated for market development projects since the beginning of the program are summarized by fiscal year as follows:

<u>Fiscal Year</u>	<u>USDA Funds</u> (Thousands of Dollars)	<u>Cooperator Funds</u> (Thousands of Dollars)	<u>Total</u>
1956	\$ 1,425	\$ 165	\$1,590
1957	5,167	2,287	7,454
1958	5,510	1,446	6,956
1959	4,305	1,688	5,993
1960	10,373 (est.)	Not available	---
1961	13,622 (est.)	Not available	---

Dollar costs to support the market development program were \$214,000 in 1959 and are estimated to amount to about \$224,000 in 1960 and \$254,000 in 1961. These costs are centered in the Foreign Trade Promotion Division which devotes full time to the market development activities. No indirect costs have been included because those costs are distributed to other units in FAS and would continue in 1961 regardless of the level of the Special Foreign Currency Program.

Table 1 attached shows actual obligations in dollar equivalents of foreign currencies by country from the beginning of the program through fiscal year 1959, and estimated obligations for 1960 and 1961. Table 2 shows obligation by commodity and miscellaneous projects and cooperators' contributions from the beginning of the program through June 30, 1959. (See also Chart No. 7)

Table 1. Dollar Equivalent of Foreign Currency Obligations

Country	: Obligations from : : Beginning of : : Program thru : : FY 1959 :	: Estimated : : Obliga- : : tions : : FY 1960 :	: Estimated : : Obliga- : : tions : : FY 1961 :
Argentina.....	\$ 112,271	\$ 139,180	\$ 15,000
Australia.....	4,500	503	---
Austria.....	681,081	264,573	245,000
Belgium.....	173,602	56,945	220,000
Brazil.....	568,236	362,333	515,000
British Guiana.....	---	6,000	---
Burma.....	177,942	260,187	348,000
Canada.....	---	108,000	---
Ceylon.....	---	28,000	53,000
Chile.....	262,821	209,247	100,000
Colombia.....	459,483	232,822	450,000
Costa Rica.....	---	6,000	20,000
Denmark.....	---	98,000	105,000
Ecuador.....	137,363	129,103	65,000
Egypt.....	8,390	84,441	397,000
El Salvador.....	---	52,000	---
Finland.....	123,621	77,509	200,000
France.....	1,431,601	703,181	820,800
Germany.....	978,226	718,043	925,000
Ghana.....	---	34,400	20,000
Greece.....	599,322	559,895	321,000
Guatemala.....	17,262	13,023	20,000
Hong Kong.....	---	47,000	50,000
India.....	923,758	1,038,350	931,000
Indonesia.....	32,929	124,490	359,000
Iran.....	13,315	184,053	---
Ireland.....	---	5,000	---
Israel.....	53,471	312,187	340,000
Italy.....	2,204,181	445,941	857,600
Japan.....	3,275,859	797,152	1,512,900
Korea.....	91,243	42,302	74,000
Malaya.....	10,988	23,110	80,000
Mexico.....	175,832	368,451	223,400
Netherlands.....	358,322	259,604	330,000
Nicaragua.....	---	5,000	---
Nigeria.....	---	57,000	10,000
Norway.....	---	60,000	100,000
Pakistan.....	276,178	281,453	290,000
Panama.....	---	5,000	20,000
Peru.....	354,221	308,304	294,000
Philippines.....	115,215	312,963	126,000
Poland.....	184,625	366,460	160,000
Portugal.....	82,804	160,823	32,500
Spain.....	1,515,154	694,695	1,214,000
Sudan.....	---	---	10,000
Surinam.....	---	12,000	---

Table 1. Continued

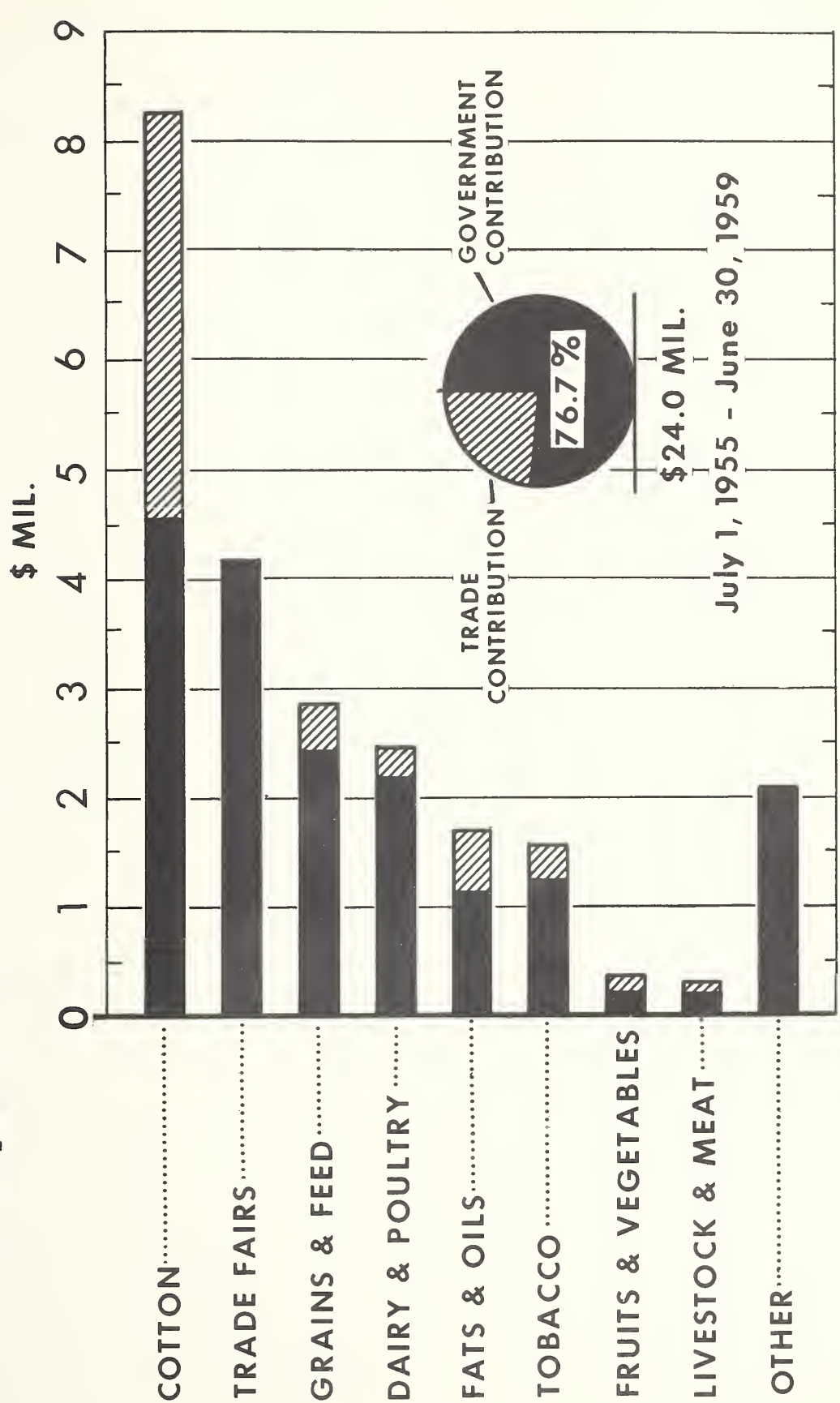
Country	Obligations from : Beginning of : Program thru : FY 1959	Estimated : Obliga- : tions : FY 1960	Estimated : Obliga- : tions : FY 1961
Sweden.....	15,833	132,000	170,000
Switzerland.....	347,467	100,317	270,000
Thailand.....	608,117	26,267	307,000
Turkey.....	148,268	192,185	64,000
Union of South Africa.....	---	---	20,000
United Kingdom.....	418,456	192,386	475,000
Uruguay.....	---	15,000	66,000
Venezuela.....	---	45,000	180,000
West Indies Federation.....	---	77,000	40,000
Yugoslavia.....	436,654	488,137	175,600
Total 104(a).....	17,378,611	11,323,015	13,621,800
Total 104(f).....	54,236	65,764	---
Total 104(m).....	---	1,275,000	1,000,000
Grand Total	17,432,847	12,663,779	14,621,800

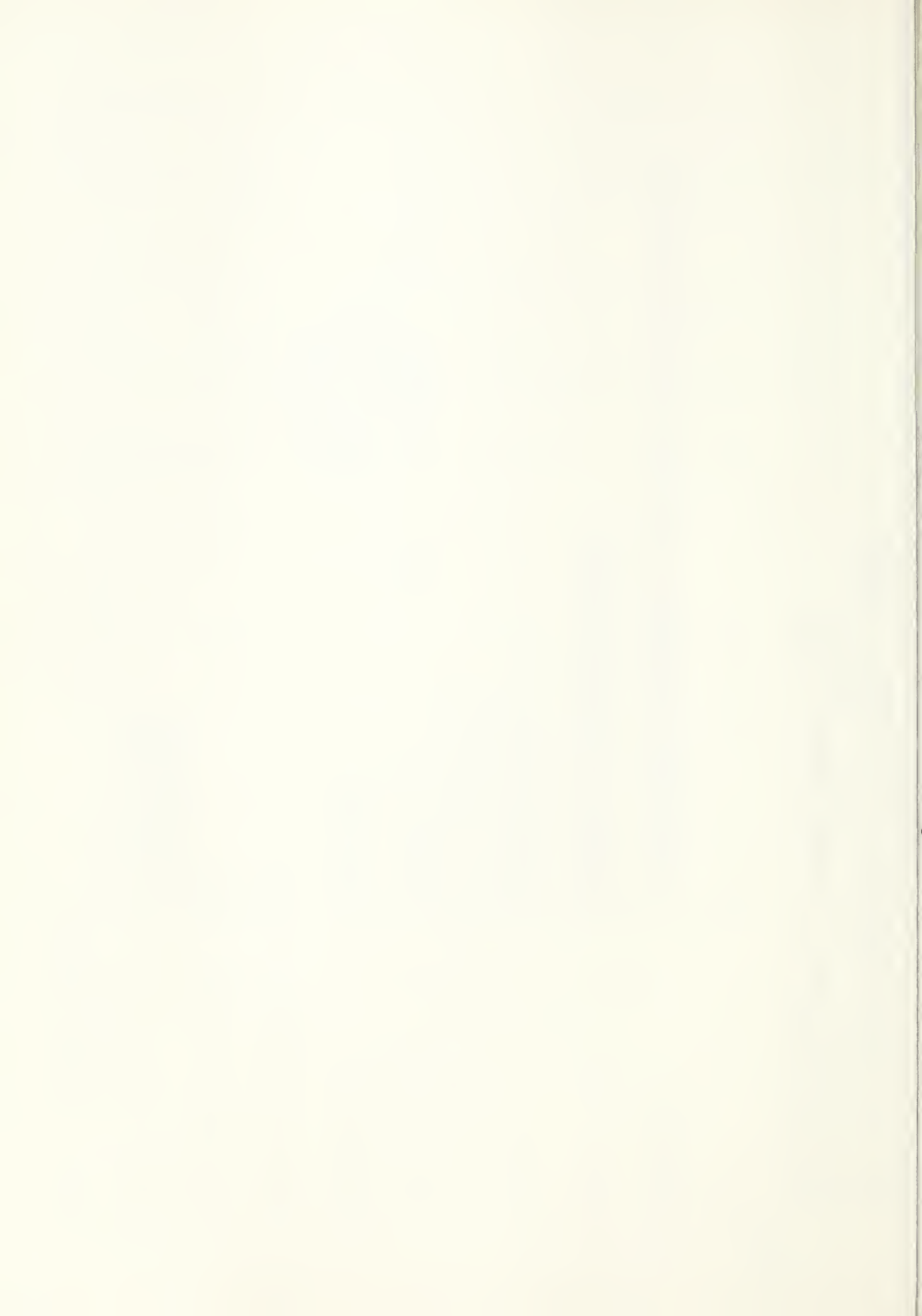
Table 2. Obligations by Commodities and Miscellaneous Projects
and Contributions by Cooperators from the Beginning of the
Market Development Program through June 30, 1959

(Stated in Approximate Dollar Equivalents)

	:	:	Contributions		:
	:	:			:
	:	:			:
	:	:			:
	:	:			:
Commodity or Project	:	:	U. S.	Foreign	:
	:	:	Cooperators:	Cooperators	:
	:	:	or Others	or Others	:
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U. S. Government, Private Trade Share Export Promotion Cost





ACTIVITIES UNDER PUBLIC LAW 480 AND RELATED PROGRAMS

This statement describes the activities and shows the progress for the following:

- I. Sale of commodities for foreign currencies under Title I of Public Law 480 (Agricultural Trade Development and Assistance Act).
- II. Grants of commodities to friendly peoples for famine relief and other assistance under Title II of Public Law 480.
- III. Sale of commodities for foreign currencies under Section 402 of the Mutual Security Act.

(Uses by agencies of the Department of Agriculture of foreign currencies derived from sales under Title I are discussed elsewhere in these Explanatory Notes, as follows:

- (a) Market development projects under Section 104(a) and agricultural and horticultural exhibitions under Section 104(m) are included in the justification of the Foreign Agricultural Service, beginning on page 467 of this volume.
- (b) Market development research abroad under Section 104(a) and agricultural forestry, and marketing research under Section 104(k) are discussed in the justification of the Agricultural Research Service.)

* * * * *

I. Sale of Commodities for Foreign Currencies under Title I of Public Law 480

1. Authority: Title I of the Agricultural Trade Development and Assistance Act, Public Law 480, as amended, authorizes the President until December 31, 1961, to enter into agreements with friendly nations providing for the sale of surplus commodities for foreign currencies. In negotiating such agreements the President is required, among other things, to take reasonable precautions to safeguard usual marketings of the United States and to assure that sales for foreign currencies will not unduly disrupt world prices or normal patterns of commercial trade with friendly countries, to take appropriate steps to assure the use of private trade channels, and to give special consideration to the development and expansion of demand abroad for agricultural commodities. The legislation authorizes the Secretary of Agriculture to determine the nations with whom agreements shall be negotiated and to determine the commodities and quantities which may be included in such negotiations and agreements. The President is authorized to use, in agreement with the country concerned, foreign currencies accruing from sales for various purposes.

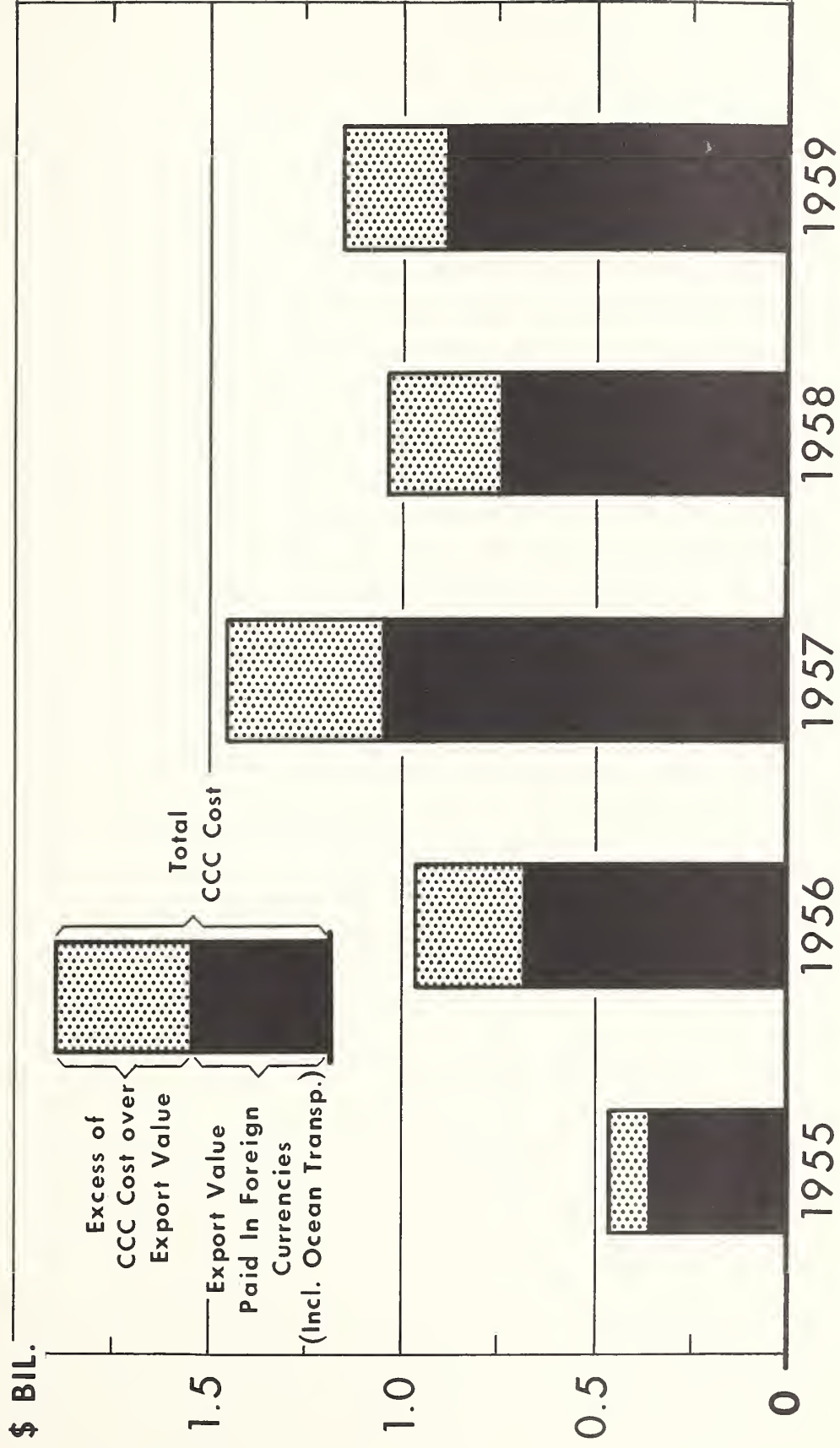
2. Total Program Agreements: Since the inception of the program through November 30, 1959, a total of 170 agreements, or supplements to agreements were entered into with 38 friendly governments. The total value of these agreements based on costs to the Commodity Credit Corporation is estimated at \$5,273.4 million with an export market value of \$3,668.6 million, both exclusive of ocean transportation costs of \$431.4 million to be financed by CCC. CCC is reimbursed for its costs by appropriations. The commodity composition export market value, and CCC cost of these agreements are summarized in the following tabulation. (See also Chart No. 8).

Commodity	Unit	Approximate quantity	Export market value	Estimated CCC Cost
			Million dollars	Million dollars
Wheat and wheat flour.....	Bu.....	1,021,695,000	\$ 1,700.2	\$ 2,745.1
Feed grains.....	do.....	225,283,000	264.2	403.3
Rice.....	Cwt.....	38,633,000	240.2	387.1
Cotton.....	Bale.....	4,113,200	633.4	864.5
Cotton linters.....	do.....	7,000	.3	.3
Meat products.....	Lb.....	120,872,000	39.2	39.2
Tobacco.....	do.....	258,440,000	187.0	187.0
Dairy products.....	do.....	285,333,000	47.8	83.4
Fats and oils.....	do.....	3,657,874,000	530.1	537.3
Poultry.....	do.....	17,661,000	5.4	5.4
Dry edible beans.....	Cwt.....	591,000	4.4	4.4
Fruits and vegetables.....	Lb.....	177,955,000	16.0	16.0
Seeds.....	Cwt.....	10,000	.4	.4
Total.....			3,668.6	5,273.4
Ocean transportation.....			431.4	431.4
Total, including ocean transportation.....			4,100.0	5,704.8

3. Shipments: About \$3,100 million worth or almost 85 percent of these commodities at export market value were shipped as of November 30, 1959. About \$730 million of this amount represented shipments during the fiscal year 1959, and about \$290 million during the five months of the fiscal year 1960, roughly parallel to the level during the same period in the fiscal year 1959. Shipments for the 1959 fiscal year were up about 10 percent from the level reached in the fiscal year 1958.

The value of shipments represented about 20 percent of the total value of U. S. agricultural exports during the fiscal year 1959. In terms of quantities, Title I wheat exports comprised about 61% of total wheat exports during the fiscal year 1959; rice, 27%; cotton 20%; and cotton-seed oil and soybean oil, 71%.

Foreign Currency Sales Continue at High Level



4. Progress During 1959 Fiscal Year in Negotiating Agreements.

- a. Korea. On June 30, 1959, an agreement was signed involving the sale of \$33.0 million worth of wheat, cotton and feedgrains. Of this amount, the hwan equivalent of \$25.0 million, or 85 percent, will be turned over to the Republic of Korea as a grant for defraying part of the expense of maintaining its armed forces. The Korean armed forces serve as a deterrent factor to resumption of Communist aggression in that part of the world. To attain this objective, it is necessary for the ROK military establishment to be much larger in proportion to the size of the population than is true in most countries. The Korean economy cannot bear the huge cost alone. Therefore, common defense purposes are well served by allocating 85 percent of the value of the Korean Title I program to defense support under Section 104(c) of PL 480.
- b. China (Taiwan). One million dollars worth of dairy products were included in a sale to the Republic of China consummated June 9, 1959. As part of the negotiation of this agreement, the Chinese Government agreed to relax its restrictions on sales of milk by a milk-recombiner company which is affiliated with a major American dairy firm. Heretofore, this company could sell its recombined milk products only to the American community on Taiwan. It will now be free to expand its market to include the Chinese population. An opportunity is thus afforded to develop and expand an additional market for U. S. dairy products, and at the same time provide one more showcase operation of recombined dairy products in an oriental country where per capita consumption of milk is very low.
- c. France. The agreement signed March 21, 1959, provided for sale of \$24,000,000 worth of cotton with a usual marketing requirement of an additional \$12.5 million worth from the U. S.; and \$3.5 million worth of tobacco with a usual marketing requirement of \$1.5 million during FY 1959 and \$2.0 million worth during FY 1960. The deliveries of the PL 480 cotton and the usual marketing requirement for cotton may extend through calendar year 1959. Deliveries of PL 480 tobacco may extend through FY 1960. By providing for deliveries of tobacco on this basis it was possible to restore the usual marketing requirement to the \$2.0 million level for FY 1960 over the \$1.5 million level for FY 1959. The lower figure was a result of France's financial difficulties during the early part of FY 1959. As regards currency uses, this agreement provides among other U. S. agency uses for approximately \$6.0 million worth of French francs for military dependent housing. It also provides for approximately \$2,455,000 worth of francs for research on utilization of agricultural commodities.
- d. Spain. An agreement signed with Spain on January 13, 1959 provided that \$1.0 million worth of tobacco could be sold for pesetas under the agreement in the form of tobacco products with the leaf tobacco content of the products financed under PL 480. This has helped make possible the resumption of imports of American cigarettes into Spain after such imports had been prohibited for several years. On currency uses, the agreement provided among other uses that construction

materials worth the equivalent of \$200,000 would be provided by Spain for assistance to the American School in Tangier, Morocco.

- e. India. A \$238.8 million agreement was entered into with India. This sale helped reduce burdensome supplies of U. S. grains. It also came at a very opportune time from the standpoint of enabling India to help meet its serious food deficits. Local currencies generated from the sale of commodities under this agreement are playing a significant role in continuing India's economic development.
 - f. United Arab Republic (Egypt). An agreement and supplement were signed with the United Arab Republic for the sale of surplus U. S. agricultural commodities totalling \$62.3 million market value including ocean transportation. Commodities included: wheat or wheat flour, tobacco, rice, soybean or cottonseed oil, feed grains, poultry, nonfat dry milk, and anhydrous milk fat. This is the first Title I program with that country since December 14, 1955. It has substantially contributed to the strengthening of friendly relations between the Governments of the United States and the United Arab Republic. The Egyptian pounds generated by the Title I sales are being used for a variety of purposes, including the development of markets for U. S. commodities in the United Arab Republic, loans to private business firms, and a loan to the United Arab Republic for economic development purposes. Also, approximately \$500,000 worth of Egyptian currency proceeds will contribute to the support of the American University of Cairo -- an influential American-sponsored educational institution.
 - g. Israel. The agreement with Israel provided for the sale of \$38.3 million worth of agricultural commodities, market value including ocean transportation. Of this amount, the Israeli pound equivalent of up to \$2.0 million may be used for agricultural utilization research. By this means Israel scientific institutions and scientists can add substantially to the development of new uses for U. S. agricultural commodities and to the expansion of export markets.
- 5. Program Results: Table I shows the commodity composition of the agreements entered into through November 30, 1959, in terms of dollar amounts, Table II, the approximate quantities, and Table III, the planned uses of the foreign currencies.
 - 6. Amendments to Title I.: Public Law 86-341, approved September 21, 1959, amended Title I by extending the authority for two years through December 31, 1961, and increasing the authorization from \$6.25 billion to \$9.25 billion.

In addition, the amendment provides (1) that from sale proceeds and loan repayments under Title I not less than the equivalent of five percent of the total sales made under Title I after September 21, 1959 shall be available for agricultural market development activities under 104(a), with the use of funds subject to appropriation procedure after June 30, 1960: (2) for the revision of 104(b) to authorize the purchase of other materials in addition to strategic and critical materials for the supplemental stockpile; (3) for the separation of existing authority

I-Commodity composition of programs under Title I, Public Law 480 agreements signed July 1, 1954 through Nov. 30, 1959.

Country 1/	Wheat and flour	Feed grains	Rice	Cotton	Tobacco	Dairy products	Fats and oils	Other	Total				
									Market value	transporta- tion	Ocean 2/	Market value including O.T.	
	Million dollars	Million dollars	Million dollars	Million dollars	Million dollars	Million dollars	Million dollars	Million dollars	Million dollars	Million dollars	Million dollars	Million dollars	Million dollars
Argentina.....	--	--	4.6	--	--	--	54.3	--	58.9	3.6	62.5	70.0	
Austria.....	6.9	15.7	--	10.3	4.8	--	2.4	.2	40.3	3.4	43.7	62.6	
Brazil.....	147.8	.6	--	--	.7	2.2	4.1	--	155.4	24.0	179.4	280.6	
Burma.....	--	--	--	32.0	2.8	2.1	1.8	.1	38.8	1.8	40.6	54.2	
Ceylon.....	5.9	--	11.9	--	--	--	--	--	17.8	3.2	21.0	31.2	
Chile.....	14.1	--	--	7.1	.2	--	14.9	.4	36.7	2.7	39.4	53.7	
China(Taiwan).....	16.3	--	--	4.7	6.0	2.4	3.0	--	32.4	2.4	34.8	45.7	
Colombia.....	39.4	--	--	11.9	1.6	.3	9.5	--	62.7	6.8	69.5	95.9	
Ecuador.....	3.1	--	--	.4	--	--	4.3	--	8.5	.8	9.3	11.4	
Finland.....	10.5	2.3	--	8.7	11.8	--	--	2.3	35.6	2.0	37.6	49.8	
France.....	--	--	--	47.0	10.1	--	--	--	57.1	.8	57.9	85.5	
Germany.....	--	--	--	--	--	--	--	1.2	1.2	--	1.2	1.2	
Greece.....	26.9	14.5	--	--	--	4.4	13.7	--	59.5	6.8	66.3	93.9	
Iceland.....	1.9	2.2	.2	.9	1.3	--	.3	1.4	8.2	.8	9.0	11.1	
India.....	658.9	17.7	42.9	55.8	6.5	3.5	--	--	785.3	3/ 148.7	934.0	1,364.7	
Indonesia.....	10.0	58.8	58.8	52.7	15.0	2.0	--	--	138.5	11.5	150.0	219.9	
Iran.....	9.2	--	--	--	--	.8	--	--	10.0	2.6	12.6	20.8	
Israel.....	39.3	38.6	.6	4.4	.8	16.2	7.5	10.7	118.1	12.7	130.8	186.3	
Italy.....	1.5	6.3	--	82.4	17.9	--	37.7	1.0	146.8	5.3	152.1	190.4	
Japan.....	47.9	13.7	13.7	52.5	7.6	--	--	--	135.0	13.5	148.5	201.6	
Korea.....	55.9	31.8	24.3	17.3	6.6	.3	.5	8.0	144.7	18.9	163.6	217.2	
Mexico.....	--	26.6	--	--	--	--	--	--	26.6	1.6	28.2	63.5	
Netherlands.....	--	--	--	.2	--	--	--	--	.2	4/	.2	.3	
Pakistan.....	124.3	--	65.3	5/ 30.3	4.8	4.9	13.3	--	242.9	27.9	270.8	401.8	
Paraguay.....	1.7	--	--	--	--	.4	.5	--	2.6	.3	2.9	4.5	
Peru.....	14.7	--	4.4	--	--	.2	1.0	4/	20.3	1.8	22.1	35.8	
Philippines.....	--	--	6.1	4.9	--	1.7	.4	4/	13.1	1.3	14.4	21.8	
Poland.....	56.5	41.4	--	63.1	--	1.8	16.4	--	179.2	14.9	194.1	270.1	
Portugal.....	6.3	--	--	--	--	--	--	--	6.3	.9	7.2	13.5	
Spain.....	6/ 4.4	25.9	--	7/ 75.5	20.3	1.5	219.5	20.2	367.3	23.3	390.6	431.8	
Thailand.....	--	--	--	--	3.9	.5	--	--	4.4	.2	4.6	4.9	
Turkey.....	72.8	17.8	2.1	--	--	2.6	72.9	7.1	175.3	21.9	197.2	262.2	
UAR (Egypt).....	91.0	3.4	5.3	--	9.0	--	3.7	.5	112.9	12.8	125.7	183.8	
UAR (Syria).....	4.6	3.9	--	--	--	--	--	--	8.5	1.1	9.6	12.9	
United Kingdom.....	--	--	--	--	38.0	--	--	10.1	48.1	.4	48.5	49.7	
Uruguay.....	--	2.2	--	7.3	6.1	--	--	--	15.6	.9	16.5	19.7	
Viet Nam.....	--	--	--	--	10.5	--	--	--	10.5	.5	11.0	11.0	
Yugoslavia.....	228.4	--	--	64.3	--	--	48.4	2.2	343.3	49.3	392.6	571.0	
Total.....	1,700.2	8/264.2	240.2	633.7	187.0	9/ 47.8	10/530.1	11/ 65.4	3,658.6	421.4	4,100.0	5,704.8	



- 1/ Agreement with Bolivia expired. No funds expended.
- 2/ Includes only ocean transportation to be financed by CCC.
- 3/ Includes \$6 million estimated for ocean freight differential for which no rupee deposits are required. The balance, \$142.7 million, only, is reflected in the currency use Table VI.
- 4/ \$50,000 or less.
- 5/ Includes \$1.7 million extra-long staple.
- 6/ Wheat sold to Spain for resale to Switzerland for financing procurement of Swiss goods by Spain.
- 7/ Includes \$0.3 million, cotton lintens; \$6.8 million, extra-long staple.

	<u>Mill. dol.</u>		<u>Mill. dol.</u>
8/ Corn	119.4	11/ Austria, Burma, Finland, Iceland, U.K. & Yugoslavia	14.5
Oats	5.9	Fruit, (dried, fresh &/or canned)	.4
Barley	98.5	Chile, hay and pasture seeds	2.2
Grain sorghums	34.5	Germany & Italy, poultry	.6
Rye	5.2	Israel, dry edible beans	10.0
Total	264.2	frozen beef	.1
		dried prunes	8.0
		Korea, canned pork	neg.
		Peru, poultry	neg.
9/ Condensed milk	1.8	Philippines, dry edible beans	16.8
Dry whole milk	2.0	Spain, meats	1.4
Nonfat dry milk	16.0	potatoes	1.5
Evaporated milk	3.6	dry edible beans	.5
Butter, butter oil &/or ghee	19.7	poultry	4.4
Cheese	4.6	poultry	2.2
Whey	.1	dry edible beans	.5
Total	47.8	United Arab Republic, poultry	.5
		Yugoslavia, dry edible beans	1.8
		Total	65.4

	<u>Mill. dol.</u>
10/ Cottonseed oil &/or soybean oil	445.6
Cottonseed oil &/or soybean oil &/or lard	40.9
Linseed oil	1.1
Lard	25.6
Tallow &/or grease	16.2
Total	530.1



TABLE II.-Approximate quantities of commodities under Title I, Public Law 480 agreements signed July 1, 1954 through Nov. 30, 1959.

Country	Wheat and flour	Feed grains	Rice	Cotton	Tobacco	Dairy products	Fats and oils	Poultry	Dry edible beans	Fruits and vegetables	Meat	Hay and pasture seeds
	1,000 bushels	1,000 bushels	1,000 cwt.	1,000 bales	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 cwt.	1,000 pounds	1,000 pounds	1,000 cwt.
Argentina.....												
Austria.....	4,055	11,621	767	65.8	7,425		386,841					
Brazil.....	88,527	369			330	6,257	23,715			1,299		
Burma.....				215.9	4,084	12,345	11,077			808		
Ceylon.....	3,650		1,932									
Chile.....	8,830			43.3	325		94,890					
China (Taiwan).....	9,424			41.0	7,057	8,810	26,660					10
Colombia.....	21,265			71.5	1,529	1,878	59,836					
Ecuador.....	1,569			2.5	419		27,185					
Finland.....	5,881	1,458		49.9	20,992					15,080		
France.....				363.1	16,142			4,542				
Germany.....												
Greece.....	16,598	12,911				35,952	81,347					
Iceland.....	1,002	1,474	29	4.9	1,222		1,946			13,045		
India.....	397,658	14,808	7,646	346.6	6,570	40,524						
Indonesia.....	5,999		9,699	362.1	24,434	28,571						
Iran.....	5,296					1,630						
Israel.....	23,284	35,237	94	24.0	1,110	77,738	51,806		82	709	24,758	
Italy.....	896	5,197		518.5	22,800		253,891	2,858				
Japan.....	30,979	11,094	2,142	319.3	9,792						15,041	
Korea.....	33,180	30,209	3,030	124.4	8,486	1,210	2,741					
Mexico.....		20,484										
Netherlands.....				1.8								
Pakistan.....	75,549		10,496	1/175.5	5,777	11,126	91,982					
Paraguay.....	1,001					917	3,521					
Peru.....	8,547		652			773	7,964	145				
Philippines.....			928	29.3		15,424	4,663		2			
Poland.....	34,088	36,058		428.7		21,084	131,115					
Portugal.....	3,879											
Spain.....	2/ 2,598	20,967		3/447.0	27,775	7,123	1,502,966	1,787	206	50,822	66,466	
Thailand.....					5,439	1,957						
Turkey.....	43,050	15,544	335			12,014	480,507	6,900	66		14,607	
UAR (Egypt).....	57,042	2,593	883		10,588		31,275	1,429				
UAR (Syria).....	2,756	3,445										
United Kingdom.....					52,905					92,885		
Uruguay.....		1,814		50.6	6,778							
Viet Nam.....					16,461							
Yugoslavia.....	135,092			436.5			362,497		235	3,307		
Total.....	1,021,695	225,283	38,633	4,120.2	258,440	285,333	3,657,874	17,661	591	177,955	120,872	10

1/ Includes 5,000 bales extra-long staple.

2/ Wheat sold to Spain for resale to Switzerland for financing procurement of Swiss goods by Spain.

3/ Includes 7,000 bales cotton lintners and 20,000 bales extra-long staple.

	<u>Thous. bu.</u>		<u>Thous. lb.</u>
4/ Corn	89,513	6/ Cottonseed oil and/or soybean oil	3,016,983
Oats	7,644	Cottonseed oil, soybean oil and/or	
Barley	90,029	lard	268,142
Grain sorghums	33,360	Linseed oil	7,492
Rye	<u>4,737</u>	Lard	180,066
Total	225,283	Tallow and/or grease	<u>185,191</u>
		Total	3,657,874

7/ All fruit except Spain which is potatoes.

	<u>Thous. lb.</u>		<u>Thous. lb.</u>
5/ Condensed milk	8,344	8/ Israel, frozen beef	24,758
Dry whole milk	3,789	Korea, canned pork	15,041
Nonfat dry milk	181,493	Spain, canned hams	2,403
Evaporated milk	27,607	fat backs	2,547
Butter, butter oil	43,229	frozen beef & variety meats	61,516
and/or ghee	18,870	Turkey, frozen beef	<u>14,607</u>
Cheese	<u>2,001</u>	Total	120,872
Whey	285,333		
Total			



TABLE III.--Uses of foreign currency as provided in Title I, Public Law 480 agreements signed July 1, 1954 through Nov. 30, 1959. 1/ (Amounts are in dollar equivalents at the deposit rate of exchange.)

Country	Total in a- greements (Mkt. value including: ocean transportation):	104(c) Common defense	104(e) Grants for multi.trade: & economic development:	104(e) Loans to private enterprise:	104(g) Loans to foreign governments:	104(f) Payment of U.S. obligations:	Other U.S. uses 2/
	Thous. dol. equiv.	Thous. dol. equiv.	Thous. dol. equiv.	Thous. dol. equiv.	Thous. dol. equiv.	Thous. dol. equiv.	Thous. dol. equiv.
Argentina.....	64,100	--	--	8,250	36,500	13,150	6,200
Austria.....	42,900	--	--	--	26,300	2,083	14,517
Brazil.....	179,920	2,000	--	--	149,222	21,850	6,848
Burma.....	40,700	--	--	--	32,550	4,842	3,308
Ceylon.....	21,000	--	3,060	5,260	8,060	1,860	2,760
Chile.....	39,600	100	--	--	31,680	5,831	1,989
China (Taiwan).....	35,300	17,900	--	6,000	1,000	9,150	1,250
Colombia.....	70,890	80	--	11,270	41,180	9,848	8,512
Ecuador.....	9,940	--	--	460	7,160	1,067	1,253
Finland.....	40,095	--	--	2,058	23,964	3,087	10,986
France.....	57,910	--	--	13,989	--	9,019	34,902
Germany.....	1,200	--	--	--	--	120	1,080
Greece.....	66,000	--	7,470	2,900	37,400	14,480	3,750
Iceland.....	8,420	--	--	765	5,986	1,446	223
India.....	926,933	--	194,400	91,699	492,233	91,570	57,031
Indonesia.....	148,300	--	15,900	12,800	92,500	20,481	6,619
Iran.....	12,411	5,763	--	--	2,503	2,814	1,331
Israel.....	130,954	--	--	19,827	91,637	13,126	6,364
Italy.....	152,900	--	--	6,250	100,500	18,256	27,894
Japan.....	150,800	3/	--	--	108,850	305	41,645
Korea.....	165,030	134,540	--	2,000	--	24,540	3,950
Mexico.....	28,200	--	--	7,100	13,600	2,900	4,600
Netherlands.....	275	--	--	--	--	25	250
Pakistan.....	271,950	79,366	12,860	29,260	90,660	26,824	32,980
Paraguay.....	3,000	--	--	--	2,250	559	191
Peru.....	25,280	100	--	1,974	16,123	3,499	3,584
Philippines.....	14,400	3,100	--	1,000	5,200	2,993	2,107
Poland.....	193,800	--	--	--	--	57,800	136,000
Portugal.....	7,100	--	--	--	3,400	1,602	2,098
Spain.....	392,130	9,500	--	--	197,140	146,443	39,047
Thailand.....	4,600	--	--	--	2,050	970	1,580
Turkey.....	197,265	52,289	--	12,980	40,542	72,483	18,971
UAR (Egypt).....	125,600	--	--	26,475	54,150	16,541	28,434
UAR (Syria).....	9,600	--	--	2,400	4,800	960	1,440
United Kingdom.....	48,150	3/	--	--	--	220	47,930
Uruguay.....	16,400	--	--	4,050	8,300	1,380	2,670
Viet Nam.....	10,900	5,400	--	2,700	--	1,870	930
Yugoslavia.....	389,730	--	106,020	--	204,821	39,004	39,885
Total.....	4/ 4,103,683	310,138	339,710	271,467	1,932,261	644,998	605,109
Uses as percent of total.....	100.0	7.6	8.3	6.6	47.1	15.7	14.7

1/ Amounts shown are subject to adjustment when actual commodity purchases and currency allocations have been made.

2/ In order to provide flexibility in the use of funds, many agreements provide that a specified amount of foreign currency proceeds may be used under various U.S. use categories including currency uses which are limited to amounts as may be specified in appropriation acts. These amounts, together with amounts provided for specific U.S. uses, comprise the amounts shown below. Included in this category are uses specified under subsections 104(a), (b), (h), (i), (j), (k), (l), (m), (n), (o), and sometimes (d) and (f).

3/ The Japanese agreement for the July-June year 1955-56 provides for the use of \$8.1 million and the U.K. agreements provide for approximately \$34.9 million 104(c).. However, since in return for this currency use, these countries will construct and make available to the U.S. Armed Forces an equivalent of dependent housing, the amounts are shown under 104(f) and "Other U.S. uses."

4/ Amounts shown in this column may differ from amounts shown on Table II which reflects purchase authorization transactions.



104(o) into two subsections, 104(o) for American educational studies abroad and new 104(p) for workshops and chairs in American studies abroad; (4) for a broadening of 104(k) to include health, nutrition, sanitation, and cultural and educational development programs; (5) for use of foreign currencies to purchase non-food items for emergency use under new subsection 104(q) within a \$5 million limit per fiscal year; and (6) that currencies not to exceed \$2.5 million per fiscal year may be used for financing audio-visual informational and educational materials, new subsection 104(r).

II. Grants of Commodities to Friendly Peoples for Famine Relief and Other Assistance Under Title II of Public Law 480

1. Legislative Authority: The Department cooperates with the International Cooperation Administration in the review and clearance of all proposals for use of commodities pursuant to Title II of Public Law 480. Under this title the President is authorized to furnish, out of CCC stocks and on a grant basis, surplus agricultural commodities to friendly governments or peoples, to assist in meeting famine, or other urgent or extraordinary relief requirements, or to assist programs undertaken with friendly governments or through voluntary relief agencies. Programs of assistance may be authorized over a 7-1/2-year period ending December 31, 1961. Reasonable precautions must be taken to assure that these transfers will not displace or interfere with sales that might otherwise be made. CCC is reimbursed for its costs by appropriations.
2. Shipments Authorized: Through November 30, 1959, shipments authorized approximated \$579 million, including \$351 million in grain, \$32 million in fats and oils, \$16 million in raw cotton, \$69 million in milk and milk products, and \$4.0 million in dry beans. Ocean transportation costs of \$108 million are included, of which about three-fourths are for ocean freight on Title III donations.

Transfer authorizations issued under Title II from July 1, 1954, to November 30, 1959, are shown in Table IV.

3. Program Highlights: Programs undertaken recently are illustrative of the scope of this legislation. About 20,000 tons of wheat and grain sorghums, valued by CCC at \$2.7 million, were provided for free distribution to the needy in Ethiopia where severe locust infestation following drought during the last two years seriously depleted food stocks in certain areas. To avert threatened food shortages in Guinea about 8,000 tons of rice and wheat flour are being shipped to that area.

Severe drought in Libya reduced grain production well below usual levels. In order to avoid serious malnutrition of the Libyan population and critical loss of livestock, more than 50,000 tons of wheat and feed grains at a total value of \$6,650,000 are being provided. The wheat will be distributed free or as part payment of wages for work relief. The feed grains will be distributed to farmers unable to buy livestock feed and will be used to maintain foundation breeding stock and work animals. Following a series of devastating cyclones and floods, 100 tons of milled rice were shipped to Madagascar for free distribution to the flood victims.

Wheat, rice and nonfat dry milk are being provided for relief of Algerian refugees who have crowded into Morocco and Tunisia. About \$1.4 million worth of food has been shipped to Morocco to be distributed over a period of six months under the supervision of the League of International Red Cross Societies. Wheat and dry milk valued at \$7.5 million will permit continuation of the refugee relief program in Tunisia for several months.

Widespread famine and unemployment caused by prolonged drought in Jordan are being relieved through shipments of about 80,000 tons of wheat and flour and 20,000 tons of feed grains. The grain will be distributed free to the needy, used directly as wages on work relief projects or sold commercially and the proceeds used to pay cash wages for work relief. Since 1956, Yemen has been beset by continued drought which has reduced grain harvests substantially. About 35,000 tons of wheat and flour were supplied for distribution to people unable to buy food.

A major crop failure due to wheat rust damage threatened famine and unrest in Afghanistan. Shipments of 50,000 tons of wheat valued at \$8.5 million are being supplied with the understanding that the grain will be sold on a non-discriminatory basis at a mutually agreed price. The proceeds will be placed in a special account and used for mutually agreed projects.

Twenty-five tons of dry milk were supplied to Sudan to help combat a disease known as Kala Agar which has become epidemic.

About \$2.5 million worth of raw cotton has been furnished to voluntary agencies to be used in the manufacture of mattresses and bedding for needy persons in Germany, Spain and Viet Nam. Bedding and other articles will be distributed in Germany free to institutions caring for needy people. Mattresses will be given to destitute persons in Spain. The voluntary agencies are financing the processing and manufacturing costs. In Viet Nam, the raw cotton will be used to stuff quilts made out of bags which contained U. S. surplus wheat donated to the voluntary relief agencies. The quilts will be produced in schools receiving support from the relief agencies and will be distributed free to 12,000 refugees from the North who are settling in new land development projects.

Intermittent heavy rains created floods in Uruguay disrupting transportation and food distribution. About \$22,000 worth of surplus foods were provided for distribution to flood victims. The U. S. armed forces delivered medical supplies and milk by helicopter to the Uruguayan Ministry of Health.

4. Amendments to Title II: Public Law 86-341, approved September 21, 1959, amended Title II by extending the authority for two years through December 31, 1961, and increasing the authorization from \$800 million to \$1.4 billion.

TABLE IV.—Transfer authorizations issued under Title II, Public Law 480, July 1, 1954, to Nov. 30, 1959.

Area and country	Total	Bread grains	Coarse grains	Fats and oils	Dry beans	Milk and milk products	Rice	Raw cotton
	Thousands of dollars	Thousands of dollars	Thousands of dollars	Thousands of dollars	Thousands of dollars	Thousands of dollars	Thousands of dollars	Thousands of dollars
Europe (total).....	170,986	76,579	31,346	14,818	1,592	37,055	730	8,866
Austria.....	22,537	500	21,987	—	—	50	—	—
Czechoslovakia.....	1,995	—	1,995	—	—	—	—	—
Germany, Federal Republic.....	3,365	236	686	911	—	367	171	994
Germany, Soviet Occupied.....	758	236	380	81	—	—	61	—
Hungary.....	12,648	4,043	1,907	2,088	437	3,759	414	—
Italy.....	78,502	26,186	4,391	10,306	1,155	32,778	—	3,686
Spain.....	4,186	—	—	—	—	—	—	4,186
Yugoslavia.....	46,995	45,378	—	1,432	—	101	84	—
Africa (total).....	62,890	51,313	6,900	—	—	2,101	2,576	—
Ethiopia.....	6,210	3,460	2,750	—	—	—	—	—
Ghana.....	605	—	605	—	—	—	—	—
Guinea.....	2,000	450	—	—	—	—	1,550	—
Libya.....	16,895	13,600	3,295	—	—	—	—	—
Malgache Republic.....	26	—	—	—	—	—	26	—
Morocco.....	9,584	8,568	—	—	—	16	1,000	—
Tunisia.....	27,570	25,235	250	—	—	2,085	—	—
Near East and South Asia (total).....	128,677	84,563	4,101	9,691	—	5,298	20,550	4,474
Afghanistan.....	17,620	17,620	—	—	—	—	—	—
Ceylon.....	8,166	4,821	—	—	—	—	3,345	—
India.....	4,665	1,017	—	—	—	1,165	2,483	—
Iran.....	2,748	2,748	—	—	—	—	—	—
Jordan.....	18,064	14,554	3,510	—	—	—	—	—
Lebanon.....	10,245	9,715	530	—	—	—	—	—
Nepal.....	3,315	3,250	61	—	—	4	—	—
Pakistan.....	47,717	22,160	—	6,149	—	253	14,681	4,474
Sudan.....	9	—	—	—	—	9	—	—
Turkey.....	12,180	4,730	—	3,542	—	3,867	41	—
Yemen.....	3,948	3,948	—	—	—	—	—	—
Far East and Pacific (total).....	45,064	30,150	—	—	—	8,075	6,712	127
Cambodia.....	2,343	—	—	—	—	—	2,343	—
China (Taiwan).....	29	—	—	—	—	—	—	29
Japan.....	37,499	29,424	—	—	—	8,075	—	—
Korea.....	78	—	—	—	—	—	—	78
Laos.....	839	—	—	—	—	—	839	—
Ryukyu Islands.....	3,530	—	—	—	—	—	3,530	—
Viet Nam.....	746	726	—	—	—	—	—	20
Latin America (total).....	37,496	15,406	9,995	1,491	1,377	1,859	4,840	2,528
Bolivia.....	17,182	10,102	—	1,137	—	391	3,024	2,528
British Honduras.....	273	22	25	106	46	44	30	—
Costa Rica.....	212	—	37	68	51	—	56	—
Guatemala.....	3,238	—	3,238	—	—	—	—	—
Haiti.....	3,409	207	133	180	1,210	43	1,636	—
Honduras.....	211	—	59	—	70	—	82	—
Mexico.....	216	—	216	—	—	—	—	—
Peru.....	12,738	5,073	6,287	—	—	1,378	—	—
Uruguay.....	17	2	—	—	—	3	12	—
Christmas holiday.....	16,688	2,306	—	5,973	1,005	4,206	3,198	—
Total commodity programs.....	471,901	260,317	52,342	31,973	3,974	68,694	38,606	15,995
Ocean freight:								
Title II shipments.....	2/22,451							
Title III foreign donations.....	85,345							
Grand total.....	579,697							

1/ Includes \$10.1 million authorization for milk for combined voluntary agencies world program.

2/ Excludes approximately \$22 million ocean freight for FYs 1955 and 1956 financed under the Mutual Security Act.

III. Sale of Commodities for Foreign Currencies
Under Section 402 of the Mutual Security Act

Section 402 of the Mutual Security Act authorizes funds to be appropriated to finance the export and sale for foreign currencies of surplus agricultural commodities or products thereof produced in the United States. In close cooperation with the International Cooperation Administration, transactions are initiated or promoted by the Department in the sale of surplus agricultural commodities under Section 402. A minimum of \$175 million was required to be utilized during the fiscal year 1959. The Mutual Security Act of 1959, Public Law 86-108, approved July 24, 1959, provides that a minimum of \$175 million of the funds available under the Act during the fiscal year 1960 shall be used to finance sales for foreign currencies or grants of surplus agricultural commodities. ICA approved procurement authorizations totaling approximately \$188 million worth of agricultural commodities in 1959 compared to about \$206 million in 1958, as indicated in the following table.

<u>Commodity</u>	Export Market Value Authorized	
	1958	: 1959
	(Millions)	
Bread grains.....	\$ 43.0	\$ 41.0
Coarse grains.....	4.0	3.1
Cotton.....	115.0	80.8
Fats and oils.....	29.0	35.6
Dairy products.....	7.0	10.9
Other.....	<u>a/ 8.0</u>	<u>a/ 16.6</u>
Total	206.0	188.0

a/ Includes ocean transportation



STATEMENT OF OBLIGATIONS UNDER ALLOTMENTS AND OTHER FUNDS

(Includes only those amounts which, by November 30, 1959, were actually received or programmed for 1960 or 1961. Since work for other agencies is performed on a service basis, at the request of those agencies and for their benefit, it is not practicable to estimate in advance the amounts to be received in most cases.)

Item	Obligations, 1959	Estimated Obligations, 1960	Estimated Obligations, 1961
Allocation of foreign currencies pursuant to Section 104(f) of the <u>Agricultural Trade Development and Assistance Act of 1954</u> :			
For travel of U. S. agricultural specialists abroad	\$54,236	\$65,764	- -
Allocations and Working Funds (Advances from other agencies):			
<u>International Cooperation Administration</u> :			
For technical assistance to:			
friendly nations	92,031	99,930	- -
For expenses incident to the Foreign Trainee Program	3,245,924	3,308,000	- -
Total, International Cooperation Administration:	3,337,055	3,407,930	- -
Trust Funds:			
<u>Miscellaneous Contributed Funds</u> :			
Department of Agriculture -			
For conducting a training program for the European Productivity Agency	4,000	4,000	- -
Obligations Under Reimbursement from Government and Other Sources:			
Salaries and Expenses:			
Commodity Credit Corporation Representatives for sales, barter and stockpiling	74,524	47,700	\$48,000
Services to other accounts	181,602	158,300	161,550
Total, reimbursements	256,126	206,000	209,550
TOTAL, OBLIGATIONS UNDER ALLOTMENTS AND OTHER FUNDS	3,651,417	3,683,694	209,550

COMMODITY EXCHANGE AUTHORITY

Purpose Statement

The Commodity Exchange Authority administers the Commodity Exchange Act of September 21, 1922, as amended.

The major objectives of the Act are: to prevent commodity price manipulation and market corners; prevent dissemination of false and misleading crop and market information affecting commodity prices; protect hedgers and other users of the commodity futures markets against cheating, fraud, and manipulative practices; insure the benefits of membership privileges on contract markets to cooperative associations of producers; insure trust-fund treatment of margin moneys and equities of hedgers and other traders and prevent the misuse of such funds by brokers; and provide information to the public regarding trading operations and contract markets.

The basic Act, originally designated as the Grain Futures Act, conferred limited authority with respect to futures trading in grains only. By amendment of June 15, 1936, its short-title designation was changed to "Commodity Exchange Act," and its regulatory provisions strengthened and extended to cotton, millfeeds, butter, eggs, potatoes, and rice. By amendment of April 7, 1938, wool tops were added to the commodities subject to the Act; fats and oils, cottonseed, cottonseed meal, peanuts, soybeans, and soybean meal were added by the Act of October 9, 1940; wool was added by enactment of Public Law 690 of August 28, 1954; and onions were added by enactment of Public Law 174 of July 26, 1955. Public Law 85-839, approved August 28, 1958, prohibited futures trading in onions effective September 27, 1958.

These functions carried out under the Act are performed through a Washington Office and five field offices, located in the commodity markets at Chicago, Kansas City, Minneapolis, New Orleans, and New York. On November 30, 1959, the Commodity Exchange Authority had 118 full-time employees and 1 part-time employee, 37 of whom were stationed in Washington, D. C. and 82 in the field offices.

	Appropriated, <u>1960</u>	Budget Estimate, <u>1961</u>
Appropriation	\$909,500	\$941,325

Salaries and Expenses

Appropriation Act, 1960 and base for 1961	\$909,500
Budget Estimate, 1961	<u>941,325</u>
Increase	<u>+31,825</u>

SUMMARY OF INCREASES, 1961

Increase to expand and accelerate investigation and elimination of abuses and unlawful market practices	+25,225
Increase for employee health benefit costs pursuant to Public Law 86-382	+6,600

PROJECT STATEMENT

Project	:	:	Increases			:
			1959	1960	Health Bene- : (estimated): fit Costs : (P.L.86-382):	Other : (estimated)
1. Licensing	:	:	\$57,738:	\$60,600 :	+\$400 :	- - : \$61,000
2. Supervision of futures trading	:	:	463,881:	481,000 :	+3,500 :	- - : 484,500
3. Audits	:	:	205,945:	199,300 :	+1,500 :	- - : 200,800
4. Investigations	:	:	167,421:	168,600 :	+1,200 :	+\$25,225(1): 195,025
Subtotal a/	:	:	894,985:	909,500 :	+6,600 :	+25,225 : 941,325
Unobligated balance	:	:	515:	- - :	- - :	- - : - -
Total health benefit costs (P.L. 86-382) ..	:	:	[- -] :	[- -] :	[+6,600] :	[+225] : [+6,825]
Total available or estimate	:	:	895,500:	909,500 :	+6,600(2):	+25,225 : 941,325
Transferred from "Conser- vation reserve program, Commodity Stabilization: Service"	:	:	:-63,500:			
Total appropriation or estimate	:	:	832,000:			

a/ Represents obligations. Applied costs for 1959 are \$897,030. The difference of \$2,045 represents primarily the excess of printing, binding, and equipment used in 1959 over orders placed in that year.

INCREASES

(1) An increase of \$25,225 to expand and accelerate investigation and elimination of abuses and unlawful market practices.

Need for Increase: For a number of years it has been necessary for the Commodity Exchange Authority to conduct its investigations and administrative proceedings on a highly selective basis, giving attention only to the most flagrant instances of violations.

Recent investigations of certain trades on three different commodity exchanges, one in New York and two in Chicago, have revealed what appears to be rather

widespread trade practice violations on each of them. Full scale trade practice investigations are required to determine the extent of these apparent violations. Investigations of this type are designed to disclose among other things instances in which an executing broker defrauded a customer by taking the opposite side of the customer's trade at prices which are to the advantage of the broker and the disadvantage of the customer; instances in which an executing broker filled a customer's order noncompetitively by allowing an associate to take the opposite side of the trade, often at prices unfavorable to the customer; and instances in which fictitious trades are made for tax purposes or to avoid delivery. Two of these investigations, which include the examination of records, transcription of trading data and subsequent analysis will be made in 1960. However, the full-scale investigations of the trading of the individual violators must then be made and evidence prepared for administrative action. This volume of work cannot be accomplished with the present personnel.

Plan of Work: Investigations of the violations indicated by the two trade practice investigations made in 1960 will be completed and work started on four additional trade practice investigations scheduled for 1961. Investigations of this kind are onerous and time-consuming but have proved to be the best means of detecting fraud and other abusive trade practices by floor brokers. Accomplishment of the work scheduled is predicated upon the increase requested, which will permit augmentation of the present staff. It is anticipated that this increase will also allow an approach to a regular and more frequent schedule of trade practice investigations for more effective enforcement of the Commodity Exchange Act.

(2) An increase of \$6,600 is required to meet health benefit costs under Public Law 86-382, applicable to the base for 1961. A full explanation of the health benefit cost estimates appears in the "Preface" at the beginning of the Explanatory Notes.

STATUS OF PROGRAM

Objective and Functions: The major objectives of the Commodity Exchange Authority, in the enforcement of the Commodity Exchange Act, are to maintain fair and competitive pricing in the commodity futures markets, by preventing manipulation and other abusive trading practices. Enforcement of the Commodity Exchange Act requires supervision over 16 commodity exchanges designated as contract markets. Enforcement is a continuous process involving the following functions:

1. Market designation and broker registration: (a) Designation of commodity exchanges as contract markets; (b) annual registration of futures commission merchants and floor brokers; and (c) continuing review of exchange rules and regulations.
2. Supervision of futures trading: (a) Audit, tabulation and review of reports required from futures commission merchants and large traders; (b) analysis of current market data; (c) establishment, enforcement, and review of speculative limits; (d) review of market news and letters; (e) maintenance of a quotation and ticker service; (f) analysis of cash commodity transactions; (g) cooperative activities with control committees of contract markets; (h) observance of floor trading; and (i) compilation and publication of market information.
3. Prevention of misuse of customers' funds: (a) Audit and examination of records of futures commission merchants to maintain segregation requirements for protection of customers' funds; and (b) analysis of brokers' financial statements.
4. Investigation and control of trade practices: (a) Investigation of complaints and alleged and apparent violations; (b) trade practice audits and surveys; (c) investigation of delivery practices; and (d) preparation and presentation of evidence of violations in administrative hearings and judicial proceedings.

Current activities: The market regulatory work of the Commodity Exchange Authority in the year ended June 30, 1959, applied to 16 commodity exchanges currently designated as contract markets. These include the Chicago Board of Trade, the Kansas City Board of Trade, the Minneapolis Grain Exchange, the New York and New Orleans Cotton Exchanges, and the New York and Chicago Mercantile Exchanges.

The agency supervised futures trading during the year in 21 commodities. In most of these, more than one exchange conducted trading in the same commodity--six in wheat, four in oats, three in cotton, etc.--so that the total number of markets for individual commodities under regulation during the year was 44. The total trading volume supervised in all commodities amounted to 7.1 million transactions, with the value of trading estimated at \$26.8 billion.

The largest volume of trading under regulation was in wheat, followed by soybeans and corn. The trading volume in grains decreased as compared with the previous year, but hedging in grains by merchandisers and processors continued at very substantial levels, and hedging in soybeans, soybean oil, and wool was the largest on record.

The regulatory workload of the agency was increased during the year by the inauguration of futures trading in additional contracts or delivery months for three commodities--wheat, lard, and potatoes.

The year was marked by substantial activity in the suppression of price manipulation. In four major price manipulation cases concluded--all of which had been vigorously contested and one case carried to the Supreme Court--the Government's charges were fully sustained and sanctions imposed on the manipulators.

In other disciplinary proceedings under the act, sanctions were imposed for exceeding speculative limits, for misusing commodity customers' funds, for trading against customers, and for failure to file required reports.

Special investigations and market-analysis projects included an investigation of trade practices in Chicago rye futures, a survey of the activities of commodity counselors, intensive surveillance of speculative activity in wheat futures, and comprehensive "position surveys" showing for selected dates the identity and commitments of all traders having open contracts in the Chicago egg futures market, the New York potato futures market, and the New York wool and wool top futures markets.

In the maintenance of the agency's system for obtaining basic data on current market operations through required reports from brokers and large traders, 490,313 such reports were received, processed, and analyzed.

Progress was made in liberalizing the reporting requirements applicable to several commodities. In the supervision of commodity brokerage activities, CEA registered 1,281 floor brokers and futures commission merchants. To safeguard the margin moneys and equities of commodity customers, the agency conducted 698 audits of the books and records of futures commission merchants.

Selected Examples of Recent Progress:

1. Manipulation cases successfully prosecuted. The agency's activity in suppressing price manipulation was further strengthened during the year by the decisions in legal proceedings on four major complaints. In the lengthy proceedings on the charges that the Chicago egg market was manipulated in 1952, the principal defendants, after exhausting every means of defense afforded by the administrative process and appeal to the U. S. Court of Appeals, lost their final appeal on February 24, 1959, when the Supreme Court declined to review the case. Sanctions were imposed on the two principal respondents, and 12 others were denied trading privileges. In administrative proceedings on another vigorously contested complaint charging

egg price manipulation in 1953 and 1956, the charges were fully sustained and sanctions imposed on the principal respondents. Proceedings were also completed on two complaints against a large grain firm charged with manipulating Kansas City wheat prices in 1955 and Chicago corn prices in 1957. The respondents, after strenuously contesting charges for more than two years, waived further proceedings and consented to an order imposing sanctions. Charges of attempted manipulation of New York potato futures prices were also sustained in administrative proceedings, and sanctions were imposed. In the year's most time-consuming case, involving a complaint charging a large cotton firm with manipulating New York and New Orleans cotton prices, the presentation of evidence was completed.

In other administrative proceedings during the year, the registration of a Chicago brokerage firm was revoked and its trading privileges suspended indefinitely for misusing customers' funds; the trading privileges of a floor broker were suspended for eight months for unlawfully trading against customers; and trading privileges of other brokers and traders were suspended for stated periods for various violations--exceeding speculative limits, failure to keep required records, failure to file required reports, and filing false reports.

2. Developments in trading supervision. The agency expanded the scope of its trading supervision to cover the rapid growth and record hedging activity in the futures markets for wool and soybean oil. The trading supervision workload was also increased during the year by the inauguration of futures trading in Long Island potatoes on the New York Mercantile Exchange, and in loose lard on the Chicago Board of Trade. Wheat futures trading on the Chicago Board of Trade and the Kansas City Board of Trade, traditionally conducted in five futures, was extended to seven delivery months.

Supervision of wheat futures trading in the latter part of the fiscal year involved close watch on speculative trading in the 1959 March and May wheat futures on the Chicago Board of Trade. A large buildup of long speculative positions occurred in the March future, resulting in heavy deliveries. The CEA found evidence of concentration and control in the carrying of cash wheat delivered on the March future, and in the sharp increase of long positions in the May future. The investigation was continuing at the end of the fiscal year.

3. Marketwide surveys in four commodities. The CEA made marketwide "position surveys" during the year covering the names, addresses, and futures holdings of all traders in four selected commodities. A survey was made of the Chicago egg futures market as of the end of August 1958 in the light of heavy trading and erratic price movements. A position survey of the New York potato futures market was made as of October 31, 1958. The composition of the increasingly-active wool and wool top markets was disclosed by a CEA survey as of the end of November 1958.

4. Enforcement of speculative limits. Daily speculative trading and position limits established by the Commodity Exchange Commission were in effect for grains, soybeans, cotton, eggs, and onions during fiscal 1959. Eighteen instances were found in which traders exceeded the limits. Speculative position limits were exceeded in 14 instances--three in wheat,

one in corn, one in rye, two in soybeans, and seven in eggs. The remaining four instances concerned the daily speculative trading limits--all in eggs. Generally, the amounts by which the speculative limits were exceeded were small and the result of errors by traders. In all instances, however, the traders involved promptly reduced their positions.

5. Supervision of anticipatory hedging. This phase of the regulatory work implements an amendment to the act which became effective September 22, 1956. Under this amendment, processors and manufacturers may purchase commodity futures in an amount not in excess of their anticipated requirements provided they made advance application to the CEA and meet other requirements. The supervision of anticipatory hedging involves analysis of the data submitted by applicant processors and manufacturers and continuing surveillance of their cash-commodity and futures positions.

6. Reporting requirements liberalized. By amendment of the regulations, the minimum level for reporting traders' positions in soybean meal was increased from 1,500 tons to 2,500 tons, in one future on one market. The reporting level for cottonseed meal was also increased from 1,500 tons to 2,500 tons. CEA regulations were also amended to reduce the amount of information which large grain merchants, processors, and dealers must report weekly regarding their cash-grain and futures positions. Under the amended regulations, data on futures positions are no longer required in these weekly reports.

7. Trade practices in rye investigated. A "trade practice" investigation in rye futures on the Chicago Board of Trade was initiated during the year. The rye investigation covered all round-lot trades in the commodity during the last week of October 1958, when round-lot trading in rye amounted to 14,000,000 bushels. The investigation showed a high degree of concentration and specialization in the activities of both floor brokers and clearing members. For example, 66 floor brokers were active in the 5-day survey period, but the 12 most active accounted for 72 percent of the total volume of round lots traded. There were 53 floor brokers having executions for their own accounts, but the five largest accounted for more than half the total trading of brokers for their own accounts. There were 38 floor brokers making executions for customers, but the five most active accounted for 62 percent of the trading for customers' accounts. In addition to providing current information on floor trading, the rye trade practice investigation revealed indications of possible instances of abusive trading which were being further investigated at the end of the year.

8. Soybean meal market expands. The number of large-size markets under supervision was increased during the year by the fast-growing activity in the soybean meal market on the Chicago Board of Trade. Volume of trading reached a record of 18,827,600 tons, three times last year's record volume of 6,089,600 tons. The year's increased activity in soybean meal futures, and larger hedging utilization of the market, reflected the active demand for high protein commercial feeds.

9. Wool market analysis. A comprehensive survey was made of all traders' positions in New York wool and wool top futures as of the end of November 1958, to obtain detailed information on the increased trading in these commodities and the numerous foreign traders who were entering the markets. New York wool futures had been used extensively for hedging against price risks during the period of declining prices in fiscal 1958. Wool futures attracted further activity in fiscal 1959 as the demand for wool became more favorable. The November 1958 survey showed that in number of traders, amount of open contracts, and hedging commitments, the wool futures market was more than twice as large as on December 31, 1957, the date of the last previous survey. The futures market for wool tops in November 1958 was also found to be somewhat larger than in the 1957 survey. The information supplied by the survey served as a benchmark for appraising the record-size trading and hedging activity which developed in the wool market in the spring of 1959.

10. Potato market. Close supervision was given the New York potato futures market during the year. The results of an investigation of the highly active potato market of the previous year were published in August 1958. As of October 31, 1958, just prior to the first delivery month of the 1958-59 season, a survey of the potato futures market supplied background data for trading supervision during the major marketing season for the 1958 Maine potato crop.

11. Continued regulatory work in onions. Following enactment of Public Law 85-839, approved August 28, 1958, banning onion futures trading, the agency widened the scope of its analysis of cash onion prices. On November 10, 1959, the 3-judge court hearing the suit brought by the Chicago Mercantile Exchange attacking Public Law 85-839, which banned trading in onion futures, upheld the constitutionality of the law and dissolved the temporary injunction under which trading had continued. On November 6, 1959, the exchange had suspended all trading in onion futures and on November 10 it ordered all open contracts settled on the basis of the closing prices on November 5. Direct appeal of the court's decision to the United States Supreme Court by the exchange is anticipated.

12. Publications and reports. The results of an economic analysis of speculation and hedging in 1957-58 potato futures, and particularly the highly active market in the spring of 1958, were published under the title, "Potato Futures Trading, 1957-58." Another report presented the results of a survey of all accounts in potato futures on the New York Mercantile Exchange on October 31, 1958.

A publication Summary of Administrative and Judicial Proceedings under the Commodity Exchange Act, January 1956-December 1958, summarized proceedings on complaints issued under the Commodity Exchange Act during the three years indicated.

The booklet Commodity Exchange Act, as Amended and Regulations of the Secretary of Agriculture Thereunder, was revised to incorporate all amendments to the act and regulations issued since the last printing in 1955.

Commodity Futures Statistics, 1957-58, published as U.S.D.A. Statistical Bulletin No. 239, continued the annual statistical series of the more important data on futures trading under the Commodity Exchange Act.

Recurring statistical reports issued during the year include the following:

Daily reports issued by the field offices on volume of trading and open contracts in regulated commodities on the principal markets

Weekly reports: Sales of cotton "on call" based on New York futures; stocks of grain in deliverable position in Federally licensed warehouses at Chicago, Illinois

Monthly reports:

Trade in Grain Futures

Trade in Cotton Futures

Commitments of Traders in Wheat Futures

Commitments of Traders in Cotton Futures

Commitments of Traders in Wool and Wool Top Futures

13. Contract markets and regulated commodities. The 16 commodity exchanges licensed as contract markets under the Commodity Exchange Act and the 21 commodities in which futures trading was conducted under the act in fiscal 1959, are as follows:

Chicago Board of Trade	Wheat, corn, oats, rye, soybeans, grain sorghums, cotton, soybean oil, lard, soybean meal
Chicago Mercantile Exchange.	Eggs, potatoes, onions, butter
Chicago Open Board of Trade.	Wheat, corn, oats, rye, soybeans
Duluth Board of Trade.	(No trading in 1958-59)
Kansas City Board of Trade	Wheat, grain sorghums
Memphis Board of Trade	
Clearing Association	Cottonseed meal, soybean meal
Milwaukee Grain Exchange	Wheat, corn, oats, rye
Minneapolis Grain Exchange	Wheat, oats, rye, flaxseed, barley
New Orleans Cotton Exchange.	Cotton, cottonseed oil
New York Cotton Exchange	Cotton
New York Mercantile Exchange	Potatoes, eggs, butter
New York Produce Exchange.	Cottonseed oil, soybean oil, tallow
Portland Grain Exchange.	(No trading in 1958-59)
San Francisco Grain Exchange	(No trading in 1958-59)
Seattle Grain Exchange	Wheat
Wool Associates of the New York	
Cotton Exchange.	Wool, wool tops

14. Market rules-review work. Intensive work was required in the exercise of the agency's continuing responsibility of reviewing the rules of contract markets to determine compliance with the market-designation requirements of the act. To adapt the terms of futures contracts to changing conditions or to broaden market services, most of the exchanges made substantive changes in their rules during the year, and several exchanges made major additions or revisions. It was necessary to review carefully the rules proposed by exchanges for the introduction of trading in additional commodity contracts. An example of intensive rules-review work with an exchange was in connection with the inauguration of futures trading in Long Island potatoes by the New Mercantile Exchange. In addition, the charter and bylaws of this exchange were completely rewritten during the year, requiring careful review. Other important rules-review projects during the year arose in connection with the "loose lard" futures contract adopted by the Chicago Board of Trade, the new rules of that exchange governing deliveries on soybean meal contracts, the revision of the rules of the Chicago Mercantile Exchange for trading in Idaho potatoes, and the adoption by that exchange of rules governing "board trading" to conform to an amendment of section 1.39 of the regulations under the act.

15. Registration of commodity brokers. In the supervision of commodity brokerage activities, there were 503 futures commission merchants and 778 floor brokers registered. As of June 30, 1959, futures commission merchants were maintaining 1,956 principal and branch offices and had agents in 348 other offices. Registration fees collected from futures commission merchants and floor brokers, and deposited in the Treasury, amounted to \$36,214, compared with \$29,824 in the previous year. The larger amount reflected an increase in the registration fee for futures commission merchants from \$25 to \$30 and for duplicate registration certificates from \$2 to \$5, pursuant to an amendment of the regulations under the act.

16. Protection of commodity customers' funds. During the year 698 audits were made of the books and records of futures commission merchants, an increase of 38 percent as compared with fiscal 1958. These included the examination of the accounts of 34,237 customers who had to their credit \$95,884,543.43 which was required to be segregated from the funds of the brokers. In addition 503 financial statements submitted by futures commission merchants were analyzed.

17. Volume of trading supervised. Futures trading in agricultural commodities continued to provide substantial "hedging" markets in fiscal 1959, although total volume of trading declined. Merchandisers and processors of wheat, corn, and soybeans continued to depend on hedging to reduce price risks, even though prices ranged narrowly during the year.

In wool and soybean oil, commodities with increased trading, there was record hedging activity. And despite a decrease in soybean trading volume, hedging in soybean futures to cover price risks on large supplies from the record 1958 soybean crop was at an alltime high. Hedging in wheat and corn did not change substantially from the previous year, although total volume of trading in wheat declined 16 percent.

The total trading volume for the grain futures markets, including soybeans, was 10.5 billion bushels, down 17 percent from 12.6 billion bushels in 1958. Wheat futures trading on all markets, including the Chicago Board of Trade, the Kansas City Board of Trade, and the Minneapolis Grain Exchange, amounted to 4.4 billion bushels in 1959 against 5.2 billion in 1958. The soybean futures volume was 2.8 billion bushels, compared with 3.9 billion in 1958. Corn futures trading, at 2.0 billion bushels, was almost unchanged from the previous year.

In cotton futures, as both speculative trading and hedging continued to decline, trading volume dropped to the lowest level on CEA records. The year's trading, including both the New York and New Orleans Cotton Exchanges, amounted to 19,709,000 bales, compared with 25,202,000 bales in 1958.

Wool futures trading at New York amounted to 197,544,000 pounds in 1959, an increase of 83.2 percent over 1958. Hedging operations which were considerable in 1958 increased further in the last half of fiscal 1959.

Activity in egg futures on the Chicago Mercantile Exchange continued in large volume--374,299 carlots, an increase of about 1 percent over 1958. Trading in potato futures on the New York Mercantile Exchange was in smaller volume--95,423 carlots, against 188,157 carlots in 1958. Onion futures trading, on the Chicago Mercantile Exchange, amounting to 41,277 carlots, was 41.0 percent less than in the previous year. The futures trading volume in lard on the Chicago Board of Trade continued downward during the year. Futures trading in soybean oil on the Chicago Board of Trade amounted to 9.4 billion pounds, an increase of 5.5 percent over 1958. Hedging in soybean oil was the largest on record. Hedging in cottonseed oil futures on the New York Produce Exchange also increased. Soybean meal futures recorded an outstanding volume increase during the year. The record 18.8 million tons traded on the Chicago Board of Trade was three times the previous year's volume.

Workload data on major activities of the Commodity Exchange Authority.

	Actual		Estimated	
	1958	1959	1960	1961
I. <u>Licensing:</u>				
Futures commission merchants registered	537	503	503	503
Floor brokers registered	813	778	778	778
II. <u>Supervision:</u>				
<u>Markets and commodities:</u>				
Exchanges	16	16	16	16
Commodities	23	21	21	21
Markets (6 wheat markets, 3 cotton markets, etc.)	46	44	45	45
Reports tabulated and analyzed:				
Daily trading volume and open contracts	239,353	221,793	225,000	225,000
Daily and weekly reports of large traders	275,187	268,520	275,000	275,000
Delivery notices	43,589	37,703	40,000	40,000
Special calls and surveys	6	4	6	6
Accounts	4,182	4,303	10,000	10,000
General activities, including observance of trading, contact with exchange officials, establishment, review and enforcement of speculative limits, quotations service, price compilations, and review of market letters	x	x	x	x
III. <u>Audits:</u>				
Audits of customers' segregated funds	506	698	650	650
Accounts examined	26,326	34,237	31,000	31,000
Financial statements	538	503	500	500
IV. <u>Investigations:</u>				
Compliance investigations completed	37	26	35	35
Trade practice investigations completed	2	1	2	4
Number of transactions examined	59,000	16,200	25,000	60,000
Criminal prosecutions instituted	0	0	1	1
Administrative proceedings instituted	7	5	7	7

x No measure of workload available.

STATEMENT OF OBLIGATIONS UNDER ALLOTMENTS AND OTHER FUNDS

(Includes only those amounts which, by November 30, 1959, were actually received or programmed for 1960 and 1961. Since work for other agencies is performed on a service basis, at the request of those agencies and for their benefit, it is not practical to estimate in advance the amounts to be received in most cases.)

Item	: : Obligations, : 1959	: Estimated : Obligations, : 1960	: Estimated : Obligations, : 1961
<u>Obligations Under Reimbursements</u>	:	:	:
<u>from Governmental and Other</u>	:	:	:
<u>Sources:</u>	:	:	:
Salaries and expenses	: \$413	: - -	: - -

